JULY 5, 1954

The Railroad's Inherent Advantages . . . p. 22

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GENERAL MOTORS LOCOMOTIVES

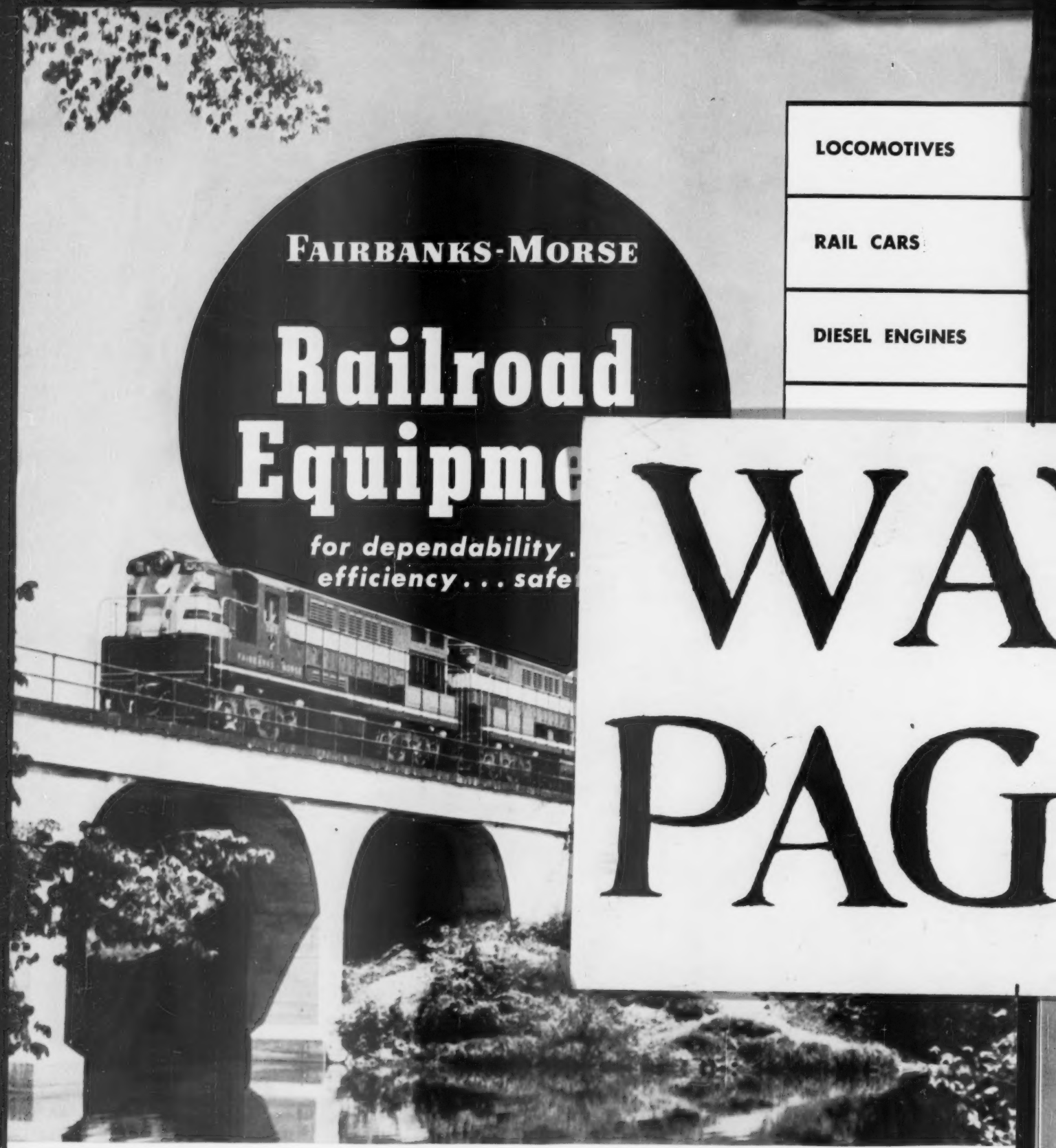
Freight Operating Statistics

New Haven M-U Cars

Why PRR Uses Aluminum Paint

ICC Hears Views on Piggyback

Suppliers Speak Up



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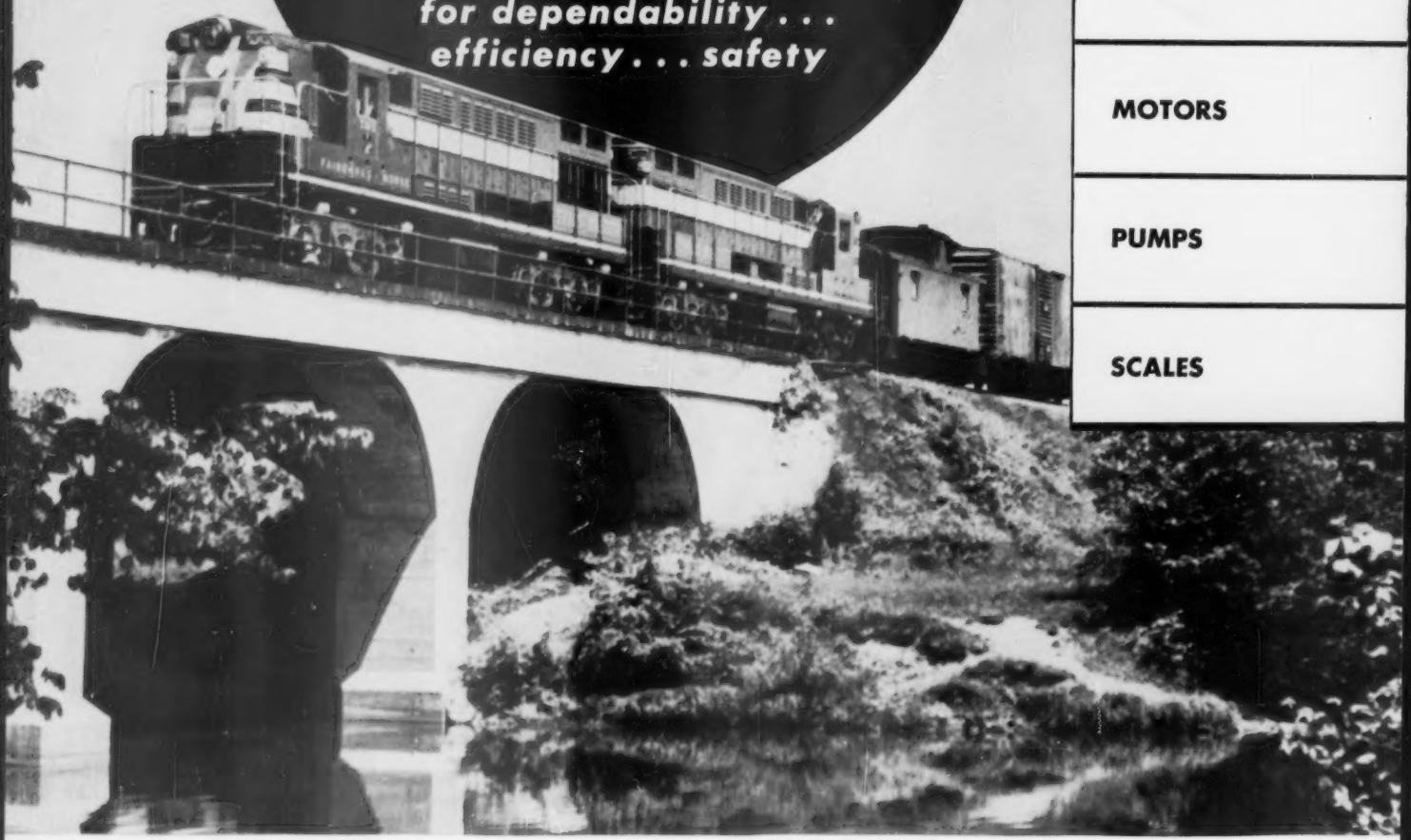

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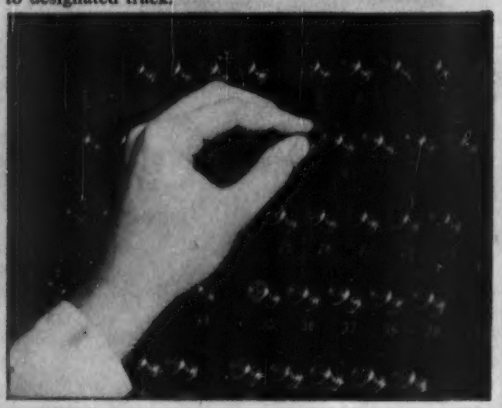
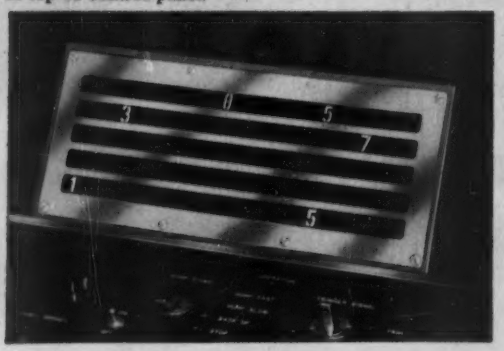


ADVANCE SELECTION of routes for as many as five cuts can be made. Selected routes are registered on indicator at top of control panel.



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Published weekly by the Simmons-Boardman Publishing Corporation at Orange, Conn., and entered as second class matter at Orange, Conn., under the Act of March 3, 1879. Name registered in U. S. Patent Office and Trade Mark Office in Canada. Simmons-Boardman Publishing Corporation: James G. Lyne, president. Samuel O. Dunn, chairman emeritus. J. S. Crane, vice-president and secretary. Harry H. Melville, C. W. Merriken, John R. Thompson, William H. Schmidt, Jr., J. S. Vreeland, Fred W. Smith, Robert G. Lewis, vice-presidents. Arthur J. McGinnis, executive vice-president and treasurer. Ralph E. Westerman, assistant treasurer.

July 5, 1954 **Vol. 137, No. 1**

Week at a Glance

A boom in passenger cars seems to be in the making. The B&M has ordered the record total of 55 RDCs; the LI is asking for bids on about $15 million of new commuter coaches; the New Haven might be interested, "if price is right," in "20 or 30" Talgos; and the CPR is just beginning to get delivery on its last-year order for 173 cars. 9, 10

That was a nice fat profit—$37.5 million—that the now-defunct Reconstruction Finance Corporation made on its politically-criticized loans to the B&O. 12

FORUM: The "Committee of Railroad Suppliers," newly formed manufacturers' group, has embarked on a campaign "to increase public understanding of railroad problems." 21

"Inherent advantages" of a railroad are identified and discussed in relation to problems facing the industry today, in the prize-winning paper in a *Railway Age* essay contest. Author — and winner — is William J. Rae. 22

Rectifier-type m-u cars for commuters — 100 of them — are going into service on the New Haven. 27

Why does the PRR use aluminum paint? Years of research and testing lie behind the road's decision to use it on bridges, catenary structures, etc. 30

BRIEFS

President P. M. Shoemaker of the Lackawanna — one of the railroads' serious students of the economics of car-supply—has announced that his company is inviting bids on from 500 to 1,000 box cars, builders being asked to present alternative bids, to the railroad's designs and to the builder's own. The railroad, says Mr.

Current Statistics

Operating revenues, four months	
1954	$ 3,030,657,088
1953	3,501,247,731
Operating expenses, four months	
1954	$ 2,455,506,101
1953	2,653,454,001
Taxes, four months	
1954	$ 297,338,860
1953	422,069,552
Net railway operating income, four months	
1954	$ 206,661,676
1953	353,248,469
Net income, estimated, four months	
1954	$ 128,000,000
1953	262,000,000
Average price railroad stocks	
June 29, 1954	67.30
June 30, 1953	63.82
Carloadings, revenue freight	
Twenty-five weeks, 1954	15,647,883
Twenty-five weeks, 1953	18,108,282
Average daily freight car surplus	
June 26, 1954	73,571
June 27, 1953	15,669
Average daily freight car shortage	
June 26, 1954	1,237
June 27, 1953	5,459
Freight cars delivred	
May 1954	3,173
May 1953	6,582
Freight cars on order	
June 1, 1954	15,615
June 1, 1953	57,345
Freight cars held for repairs	
April 1, 1954	102,266
April 1, 1953	94,896
Average number of railroad employees	
Mid-May 1954	1,061,885
Mid-May 1953	1,217,477

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Departments

Equipment & Supplies	10
Figures of the Week	9
Forum	21
Freight Operating Statistics	16
Law & Regulation	11
Operations	8
Organizations	9
People in the News	12
Public Relations	7
Questions and Answers	14
Railway Officers	13
Securities	12
Supply Trade	13
Traffic	12

Week at a Glance CONTINUED

Shoemaker, recognizes its "obligation to provide better cars for shippers"; and wants to "encourage the car building industry," and to be ready to meet possible defense needs—and is also interested in increasing its ownership of cars requiring limited maintenance.

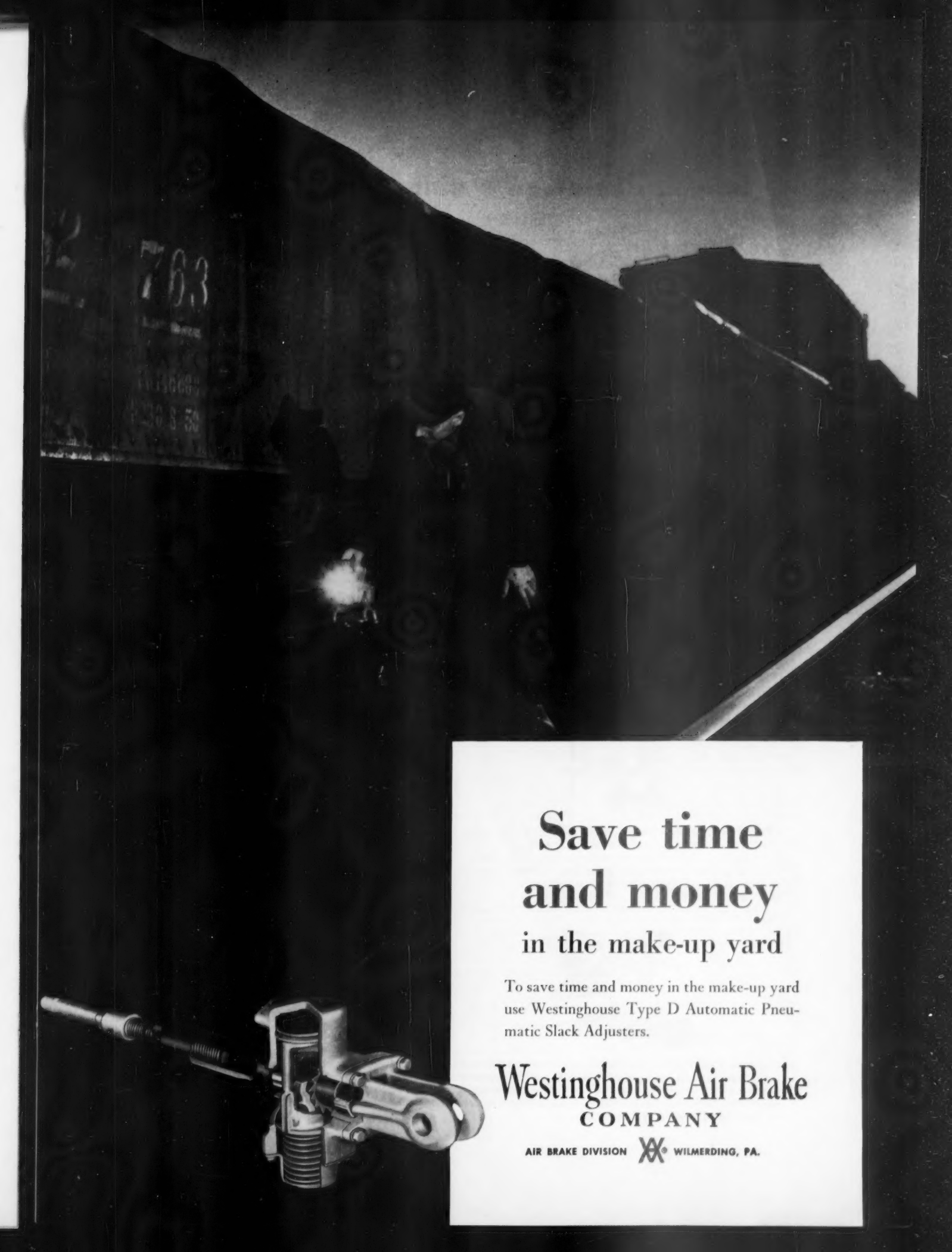
The ICC has calculated that railroads perform 2.3 times as much transportation service per berth in tourist sleepers as they do per seat in coaches; 2.76 times as much in standard sleepers; and 3.29 times as much in lightweight sleepers. Thus, it appears to the commission that the higher railroad fares for transportation in sleeping cars "do not reflect the difference in transportation service performed."

Official opening of the Quebec, North Shore & Labrador is now scheduled for July 31, when the first shipment of Labrador iron ore is due to leave the railroad's tidewater terminus at Seven Islands, Que. Regular ore shipments on the new 360-mile railroad will begin some days earlier.

Can a state bar lawbreaking trucks? The U. S. Supreme Court has agreed to review an Illinois court decision which held that the state cannot suspend interstate operating authorities of truckers for "habitual" violation of its load-limit laws. Only intrastate authorities can be suspended, the state court said.

A freak flood, caused by a broken beaver dam, held up the Canadian National's "Continental Limited" for about eight hours on one of its recent transcontinental runs. The unusual delay occurred about 250 miles north of Toronto.

An Erie Pacific type locomotive, retired when the road completed its dieselization program, is to be donated to the American-Korean Foundation for shipment overseas to help rebuild Korean railways. The C&O is donating six 0-8-0 switchers and three 2-8-0 consolidations for the same purpose.



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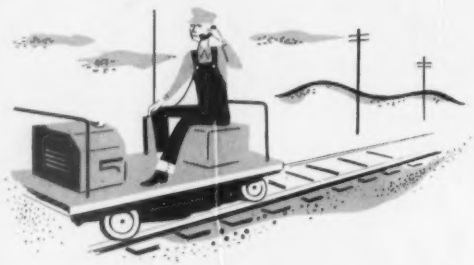
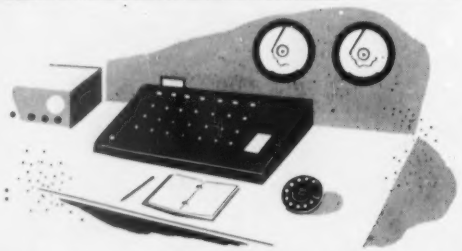


MOBILE RADIO—Waystation to train, engine to caboose, train to train. Bell System offers all these mobile radio systems to fit every railroad need.

TELETYPEWRITER—Both *private line* and *TWX service* are available. With private line you have continuous communication between all teletypewriter stations on a service—ideal for passenger reservations, manifest and wheel reports and car tracings. TWX connects you to any other TWX customer in the U.S.

INTERCOMMUNICATION—Interoffice or interdepartment systems are an important part of Bell services to railroads to speed work and cut costs.

PAGING SYSTEMS—Now you can speed the movement of cars through yards with paging and talk-back loudspeaker systems. This Bell service is used to control classification operations, handling of LCL freight, and inspectors' reports of mechanical trouble to a foreman.



TELEMETERING AND REMOTE CONTROL CIRCUITS—For electrified roads, Bell offers these services to operate control equipment at remote locations and check voltage and current conditions along the route.

"THIRTEEN THOUSAND steel workers are out of jobs"—and so are other thousands of workers in other industries and on the railroads themselves—because taxation, featherbedding and "19th-century" regulation keep the railroads too poor to spend what they should spend, and would like to spend, on new equipment and plant modernization. So B. F. Fairless (center), told the new Committee of Railroad Suppliers on June 30. With him, on his own right, is Alfred E. Perlman, and on his left, Perry M. Shoemaker, who are presidents, respectively, of the New York Central and the Delaware, Lackawanna & Western.

RRs Need "Freedom to Compete"

U. S. Steel's Fairless tells Committee of Railroad Suppliers it can make "great and patriotic contribution" by adding to "public understanding of railway problems."

"America's railroads are being taxed to death, bargained to death and regulated to death . . . If the Committee of Railroad Suppliers can add in any way to our public understanding and our public appreciation of these serious railway problems it will have made a great and patriotic contribution to our national defense, to our whole peace-time economy, and to the general welfare and prosperity of every family in America."

So Benjamin F. Fairless, chairman of the board of the United States Steel Corporation, told the first public meeting of the newly organized Committee of Railroad Suppliers—a June 30 luncheon, in New York, attended by several hundred top-level representatives of railroads, railway supply companies, financial houses, and the business and general press.

The luncheon was held to inaugurate the new committee's compaign "to increase public understanding of the railroad industry." As reported in *Railway Age* June 21, pages 23-26, and June 28, page 9, it will be followed by extensive newspaper advertising and by widespread distribution of a specially prepared booklet showing railroad management "in a realistic light," and analyzing "railroad progress and problems." E. O. Boshell, chairman of the board and president of Westinghouse Air Brake Company, and a member of the CRS executive committee, presided.

Excerpts from Mr. Fairless' talk, designed to pinpoint his charge that railroads "are caught in a three-way squeeze," follow; some of his other comments on railroad problems are included in the accompanying box.

Unjust Taxation—"To illustrate the kind of unjust taxation to which railroads are being subjected, let me cite the situation in one of our large industrial states here in the East. A good many important railroads run through this state, yet I am told that all of these together do not earn enough money within that state to pay the taxes levied upon them there. They must bring in money they have earned in other states to pay their taxes. . . .

"When any industry . . . is subjected to that kind of governmental greed, then

MR FAIRLESS SAID . . .

• "The Committee of Railroad Suppliers is doing our country a great service—and a very timely one—by launching this nationwide campaign to give the American people a fresh look at an old, and long-neglected picture—to acquaint them with the facts about the railroads—the vital service they perform, the enormous progress they have made, and the terrific handicaps under which they have had to labor."

• "Railroads themselves have grown up a lot. Unfortunately, our national thinking about them has not."

• "If some clever enemy wished to cripple our whole economy, to shut down every major industry in this land, and to render our nation utterly defenseless, he would not strike at New York or Washington, or Pittsburgh or Detroit—he would only try to stop the operation of our railroads."

• "Wholly apart from the vital job railroads have done in the field of transportation, we must also acknowledge the equally important role they play in maintaining and promoting our general economic welfare."

• "No other industry in this country has made so many fundamental advances in the face of such overwhelming obstacles. No other industry—not even the steel industry—has junked and replaced so much obsolete equipment in recent years. No other industry has plowed back, into improvements, such a high percentage of its earnings."

• "Railroad men tell me they ought to be spending fives times their present outlay for maintenance and improvements. . . . They also tell me they have long lists of projects which would yield a saving of 25% or more in operating costs; and that these savings could then be used to finance additional improvements. They say these projects are ready and waiting to go, as soon as funds are available. But the funds are not available!"

every industry — and every economic group among our people — should rise up and protest with all the vigor at their command, because they, in the end, are the ones who suffer most.

Bargaining Squeeze — "Railway workers . . . are entitled to a wage scale that is fully commensurate with the heavy responsibilities they bear.

"But through the great power of their unions — and under the sympathetic influence of political agencies — they have forced into their contracts a number of make-work rules and featherbedding practices which compel the inefficient and wasteful use of unnecessary labor. Their desire has been to open up more jobs for members of the union . . . but in actual practice the effect has been exactly the opposite.

"Waste and inefficiency can never promote job security; if today railroads were free to spend on improved service and new equipment the money they are forced to throw away on featherbedding, many thousands of new jobs would be opened up — in the steel industry, in the plants of other railway suppliers, and on the railroads themselves.

"Responsible and enlightened leaders of railway labor ought — in the best interests of their own members — to face up to the facts, and to correct intelligently the unwise and uneconomic provisions that have been written into their contracts. I know of no greater contribution they could make to the cause of full employment — no greater boon they could offer to the men and women who are now trying to eke out an existence on unemployment compensation payments.

The "Great Obstacle" — "But . . . the one great obstacle which seems to have been especially designed to block railway progress at every turn . . . is the antiquated — prehistoric — concept of federal and state regulation under which these roads are compelled, by law, to operate.

"A century or so ago . . . there was at least a valid excuse for subjecting them to governmental control in the public interest. But that was a whole century ago!

"Today railroads face tremendous competition . . . But because railroads were once a monopoly, they are still denied the right to compete freely and effectively against their rivals.

"Too Little, Too Late" — "Never within my memory have railroads been permitted to earn a fair and reasonable return — the kind of profit necessary to attract the venture capital a modern, up-to-the-minute railway system requires. The whole story of railroad earnings — under federal and state control — can be summed up in that tragic and familiar phrase: 'Too little and too late.'

"I do not believe government regulation of railroads means government management of railroads. I do not believe a modern system of transportation, in this age of jet propulsion, can be developed successfully under the horse-and-buggy concepts of 19th-century controls. I do not believe freedom to compete should ever be denied to any American enterprise in any competitive industry."

Role of RRs in National Defense Stressed by Symes

Defense production is absolutely worthless unless the output can be transported to the point where it is needed, James M. Symes, president of the Pennsylvania, said in Philadelphia on June 23. Speaking at a dinner given in his honor, and in honor of retired PRR president Walter S. Franklin, Mr. Symes charged that the nation's defense program is being weakened by failure to carry out the national transportation policy of Congress.

Rather than provide "mothballing of transportation during peacetime to insure adequate transportation during wartime," Mr. Symes advocated "removal of the artificial barriers that prevent normal, full-scale peacetime use of the rail industry," adding "about all that is necessary to bring that about is enforcement of the national transportation policy declared by Congress in 1940." He cited the St. Lawrence Seaway, displacement of domestic production and transportation of coal by imported residual oil, and the fact that practically nothing has been done to modernize regulatory procedures for any type of transportation, as violations of the spirit of Congressional policy.

GENERAL RAILWAY SIGNAL COMPANY celebrated its 50th anniversary June 12 with an open house for its employees, their families and friends. Here, Herbert W. Chamberlain, GRS president, shows the anniversary cake to some young guests. A staff of 100 guides showed guests through the company's Rochester, N.Y., manufacturing plant.

Operations

Illinois Terminal Seeks To End Passenger Service

By a petition filed with the Illinois Commerce Commission, the Illinois Terminal seeks to discontinue all its main-line passenger services between Granite City and East Peoria, 164 miles, and between Champaign and Springfield, 87 miles. The road presently operates eight trains daily between the former points and six between the latter. All are electric powered, although freight service on the same lines has been extensively dieselized. Local passenger service between St. Louis and Granite City will not be affected.

The IT said the service had run up operating deficits of more than $600,000 both in 1952 and 1953 and indicated that, should it prove necessary, a petition would be filed with the Interstate Commerce Commission for the service abandonment. The abandonment move has no connection with recent inquiries regarding purchase of the road (*Railway Age*, June 7, page 5), a spokesman stated.

C&O and N&W to Honor Each Other's Tickets

The Chesapeake & Ohio and the Norfolk & Western have arranged to honor each other's passenger tickets starting July 1, which, in effect, will double each road's east-west passenger service. The arrangement also will apply to both one-way and round-trip tickets.

The optional ticket-honoring system will apply in coaches and Pullmans between all points served by both roads: Norfolk, Va., and Cincinnati and Columbus. By special arrangement with the Atlantic Coast Line, Petersburg, Va., and Richmond will be considered common points for the C&O and the N&W.

New Haven Tests Talgo

McGinnis says he'd like "20 or 30 trains," if railroads can "get together" for "joint order on wholesale basis"

The possibility of 2½-hr New York-Boston passenger service by Talgo-type trains—promised by Patrick B. McGinnis before he won the presidency of the New Haven last April—has been given added emphasis by a June 29 press run and by current exhibition, in major New Haven cities, of ACF Industries' demonstrator units of Talgo.

But actual buying of such trains, Mr. McGinnis said during the press run, may have to wait until joint action by two or more railroads permits a "wholesale" order. "I'm shooting," he said, "for a price of $800 to $1,300 a seat, and ultimately I want a cost of only $500 per seat. I'm not interested in having 'Cadillacs' on this railroad; what I want is a mass-production Ford or Chevrolet."

Others Interested?—He believes, "at least one other road" will be interested, and said he has had "informal conversations," but no "formal negotiations," with that road—generally thought to be the New York Central.

Wants 20 to 30—If the New Haven and one or more other roads could "jointly order such trains on a wholesale basis," Mr. McGinnis said he would want "at least 20 trains," and "would prefer to order 30."

The June 29 press run was made from New Haven to Boston and return; in each direction, the 156.8 miles were covered, with four stops, in 2½ hr. By special permission of the Interstate Commerce Commission, the train reached speeds of approximately 100 mph at selected points between Guilford, Conn., and Old Saybrook, and between Mansfield, Mass., and Route 128.

It was pointed out, however, that maintenance of the proposed 2½-hr schedule between Route 128 and a similar suburban station just outside New York would require average speed of only about 85 mph; the test run demonstrated that the train could maintain that, or nearly that, speed on most of the New Haven's curves. Hence, no bursts of extraordinary speed would be required. Fastest present time between the approximate points where Talgo operation is contemplated is about 3½ hr.

Operation of a fleet of fast Talgo-type trains probably would require some new signaling, by which, as Mr. McGinnis put it, "the trains would control themselves." Such a fleet, he believes, would be primarily competitive with private automobile travel, but would serve also to attract some business from air lines.

Faster New York-Boston service is only one of many proposals Mr. McGinnis has advanced for the major increase in passenger volume which is one of his objectives for the New Haven. Others include a new type of "annual ticket"; an incentive plan for sales personnel; and particular attention to commuter traffic. Some of his ideas along these lines—and for increasing freight traffic as well—will be covered more fully in an early issue.

"Rocket" Derailment Injures About 75

Approximately 75 persons were injured when the Rock Island's "Rocky Mountain Rocket," westbound from Chicago to Denver and Colorado Springs, was derailed near Hallam, Neb., about 10 p.m., June 25. All cars of the train left the rails and slid along the right-of-way embankment. At press time for this issue, only two persons were listed as in serious condition, but approximately 50 remained in nearby hospitals through the night of the accident.

A Rock Island spokesman said the cause of the derailment had not been determined, but that it appeared to be the result of wheels locking on the first axle of the lead truck of the second diesel unit. He said the train's three units were being taken to the road's Silvis, Ill., shops for a detailed investigation.

Organizations

Claim Agents' Association Becomes AAR Division

At the annual meeting of the Association of Railway Claim Agents held at Los Angeles late in May, a resolution was adopted providing for conversion of the association from its former independent status to a division of the Association of American Railroads. It is now the General Claims Division of the AAR, with K. A. Carney as executive vice-chairman, at Chicago.

H. C. Ozburn, assistant general claim agent, Central of Georgia, was elected chairman of the new division; H. H. Hough, manager, claims department, Canadian Pacific, first vice-chairman; and V. S. Adkins, general claim agent, Elgin, Joliet & Eastern, second vice-chairman. Bruce H. Smith has been appointed secretary.

The **Mid-West Shippers Advisory Board** will hold its 107th regular meeting in the Schroeder Hotel, Milwaukee, July 14-15. C. R. Purcell, manager, traffic department, Quaker Oats Company, Chicago, and general chairman of the board, will preside at the general session on the 15th.

The **Southern Association of Car Service Officers** will hold its next meeting July 28-29, at the DeSoto Hotel, Savannah, Ga.

Figures of the Week

Freight Car Loadings

Loadings of revenue freight in the week ended June 26 totaled 713,160 cars, the Association of American Railroads announced July 1. This was an increase of 5,952 cars, or 0.08%, compared with the previous week; a decrease of 105,290 cars, or 12.9%, compared with the corresponding week last year; and an increase of 66,680 cars, or 10.3%, compared with the equivalent 1952 week, when there was a strike in the steel industry.

Loadings of revenue freight for the week ended June 19 totaled 707,208 cars; the summary, compiled by the Car Service Division, AAR, follows:

REVENUE FREIGHT CAR LOADINGS
For the week ended Saturday, June 19

District	1954	1953	1952
Eastern	111,833	135,753	108,715
Allegheny	126,912	162,424	97,343
Pocahontas	51,768	59,745	53,169
Southern	117,848	125,354	120,939
Northwestern	118,302	131,914	68,783
Central Western	121,131	132,596	130,589
Southwestern	59,414	64,792	64,431
Total Western Districts	298,847	329,302	263,803
Total All Roads	707,208	812,578	643,969
Commodities:			
Grain and grain products	57,073	58,613	65,238
Livestock	5,798	7,038	6,270
Coal	114,690	138,892	121,815
Coke	7,291	13,856	4,312
Forest products	43,551	47,310	45,576
Ore	72,110	91,101	10,912
Merchandise l.c.l.	60,544	66,867	68,724
Miscellaneous	346,151	388,901	321,122
June 19	707,208	812,578	643,969
June 12	697,583	797,252	631,042
June 5	612,315	775,489	684,247
May 29	689,292	786,755	696,860
May 22	681,967	769,618	761,705
Cumulative total, 25 weeks	15,647,883	18,108,282	17,889,445

In Canada.—Carloadings for the seven-day period ended June 14 totaled 72,525 cars, compared with 72,841 cars for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
June 14, 1954	72,525	27,921
June 14, 1953	83,984	32,881
Cumulative Totals		
June 14, 1954	1,564,847	667,711
June 14, 1953	1,821,018	801,130

B&M Orders 55 RDCs and 12 Diesels

Equipment, to cost $11,200,000, will eliminate steam power on B&M; RDC deliveries to start next December

The Boston & Maine has ordered 55 rail-diesel cars from the Budd Company, and, in addition, has authorized purchase of 12 diesel units, at a total cost of $11,200,000. The equipment ordered from Budd includes 42 RDC-1s and 13 RDC-2s. RDC deliveries are to begin next December and will continue at the rate of two units a week.

"By this investment, the largest we have ever made for equipment," T. G. Sughrue, B&M president, said, "we expect to revolutionize our passenger service and accomplish an annual saving in operating costs estimated at $1,700,000. This will permit the railroad to scrap or dispose of approximately 235 older type commuter coaches and 75 steam locomotives, thus ending use of steam power. This purchase makes the B&M the most extensive user of this modern type of self-propelled rail-diesel car in the world. We are the first railroad to attack its commuter problem in this manner."

RDCs now in B&M service are operated as 42 trains. When delivery of the new RDCs is completed, the B&M's RDCs will operate as a total of 170 daily trains, ranging in size from two to six units. Each of the new units will be used in an average of 11 trains each weekday. Conventional diesel trains will fill out the morning and evening rush hour movement.

On Saturdays and Sundays, RDCs will cover the great majority of commuter trains on the most heavily traveled lines. Under present plans, the new cars will operate principally between Boston and Haverhill, Lowell, Rockport and Portsmouth.

Domestic Equipment Orders Reported by *Railway Age* in Second Quarter 1954*

LOCOMOTIVES

Purchaser	No.	Type	Issue Reported	Builder
Babcock & Wilcox Co.	1	50-ton Diesel	June 21	Baldwin-Lima-Hamilton
Bangor & Aroostook	1	1,750-hp Rd.-Sw.	May 31	Electro-Motive
General American Transportation Corp.	1	35-ton Diesel-Hydraulic	June 21	Baldwin-Lima-Hamilton
Jersey Central Lines	7	2,400-hp Train Master	April 5	Fairbanks, Morse
LS&I	1	1,600-hp Diesel	May 31	American
Maine Central	4	1,000-hp Switching	May 3	American
NP	5	4-unit 7,000-hp Frt.	June 14	Electro-Motive
Pittsburgh Plate Glass Co.	1	80-ton Diesel	June 21	Baldwin-Lima-Hamilton
UP	4**	1,750-hp Gen. Purpose	May 31	Electro-Motive
WM	4	1,750-hp Rd.-Sw.	May 10	Electro-Motive
	2	1,600-hp Rd.-Sw.	May 10	American

FREIGHT CARS

Aliquippa & Southern	42	100-ton Gondola	April 19	R.R. Shops
CofG	500	Box	May 31	Pullman-Standard
C&EI	10	50-ton Box	April 19	Pullman-Standard
C&IM	150	50-ton Box	June 28	Pullman-Standard
CB&Q	100	70-ton Cov. Hopper	June 28	General American
FGE	100	70-ton Mech. Refrig.	April 19	Co. Shops
GB&W	2	Caboose	April 26	R.R. Shops
L&A	250	70-ton Pulpwood	May 17	Pullman-Standard
Maine Central	15	70-ton Cov. Hopper	June 28	Pullman-Standard
MP	35	50-ton Flat	April 26	R.R. Shops
NYC&StL	1	250-ton Flat	June 28	R.R. Shops
PFE	200	70-ton Mech. Refrig.	May 24	Co. Shops
PRR	200	Flat	June 21	ACF
Reading	50	70-ton Flat	June 28	R.R. Shops
Rutland	50	50-ton Box	June 28	Pullman-Standard
T&P	200	50-ton Box	April 12	R.R. Shops
Transportation Materiel Command	825	40-ton Box	June 14	Magor
	565	40-ton Gondola	June 14	Magor
UP	100	70-ton Cov. Hopper	April 26	Pullman-Standard
Union Tank Car Co.	50	50-ton Tank	May 17	Co. Shops
Wabash	50	50-ton Flat	June 28	R.R. Shops

PASSENGER CARS†

Jersey Central Lines	4	RDC-1	April 5	Budd
M-K-T	1	Coach	April 19	Pullman-Standard
SP	10	Gallery-type coach	June 21	Pullman-Standard

*Supplementing list of equipment orders reported during first three months of 1954 (*Railway Age*, April 5 page 78).

**For lease to the Camas Prairie.

†In addition to passenger cars ordered, as listed in the table, the Rock Island has indicated its intention to purchase from ACF Industries a four-car Talgo-type train, each car consisting of three articulated units (*Railway Age*, June 28). The New York Central has announced its intent to buy 10 "Siesta Coaches" from the Budd Company (*Railway Age*, May 24), and its plan to request bids for 50 or 100 air-conditioned M-U coaches (*Railway Age*, May 3).

Indian Railways to Buy Rolling Stock

The Indian Ministry of Railways has issued its schedule of rolling-stock requirements for 1955-56 that will be purchased from foreign suppliers, according to Foreign Commerce Weekly. Requirements include locomotives, boilers, boiler components, wheel sets, cranes and M-U coaches. Bids also have been invited by the North Western Railway of Pakistan for 43 high-side, open, 5½-ft-gage freight cars. A complete copy of requirements may be borrowed from the Commercial Intelligence Division, Bureau of Foreign Commerce, Department of Commerce, Washington 25, D.C.

PASSENGER CARS

Long Island Asks Bids On "Well Over 100" Cars

The Long Island has requested bids by July 28 on a fleet of new air-conditioned passenger cars which it will put into service next year as part of a $58,000,000 improvement program. The initial order will be for 120-passenger, single-deck reversible coaches expected to cost about $15,000,000. After a year, another $9,000,000 car order will be placed. "Until all bids are in, we won't know exactly how many cars that $15,000,000 will buy, but we expect it will be well over 100," Thomas M. Goodfellow, newly designated general manager, said.

CPR Receives First of 173 New Passenger Cars

The first unit of its 1953 order for 173 streamline, all-stainless-steel passenger cars for transcontinental service was delivered to the Canadian Pacific by the Budd Company on June 29. The rest of the cars, which will go into service as delivered, will be completed at the rate of about three a week over approximately the next year.

The full order, which includes Canada's first dome cars, will be distributed in 15 train sets for service between Montreal-Toronto and Vancouver.

The first car, which was personally inspected and received from Budd by N. R. Crump, executive vice-president of the CPR, was a sleeper, containing eight roomettes, one drawing room, two double bedrooms and four sections.

Representing an investment by the CPR of some $40 million, the order includes regular and dome-lounge sleepers, standard and dome coaches,

diners and baggage-dormitory cars. It was reported in *Railway Age* June 29, 1953, and December 14, 1953.

The **Canadian National** has ordered two rail diesel cars from the Budd Company, for delivery this summer. The cars (one RDC-1 and one RDC-4), are scheduled to be operated as a twin unit in daily service between the Quebec cities of Levis and Riviere du Loup.

The **Canadian Nati .al** has ordered five 50-passenger coaches and one sleeping car from the Canadian Car & Foundry Co. at a cost of $492,000. Delivery is scheduled to be completed this year. All the cars are for service in Newfoundland.

FREIGHT CARS

The **Reserve Mining Company** has ordered 350 95-ton ore cars for delivery next year. The manufacturer of the cars was not disclosed. The cars will haul crude taconite from the firm's mine at Babbitt, Minn., to a processing plant at Silver Bay, via Reserve's 47-mile interdepartmental (non-common carrier), railroad, of which 33 miles have been completed.

Directors of the **Bangor & Aroostook** have authorized purchase of 350 refrigerator cars, to cost an estimated $3,500,000, for delivery early next spring. The cars will be bought under federal certificates of necessity providing for accelerated depreciation during the first five years of ownership. Delivery of the cars is expected to complete a refrigerator- and insulated-car program begun late in 1950 with the purchase and rebuilding of 350 second-hand units.

The **Lackawanna** has requested bids for construction of 500 to 1,000 50-ton box cars. The road said it hopes contracts can be placed to assure that delivery will begin this year.

The **Nashville, Chattanooga & St. Louis** has ordered 12 50-ton pulpwood cars from its own shops at an approximate unit cost of $6,000. All will be in service about August 1.

Law & Regulation

More Time for Filings On Truck-Commodity Data

Interested parties now have until July 15 to make presentations to the Interstate Commerce Commission with respect to its two-year-old proposal to require truckers to report freight commodity statistics.

The previous deadline was June 21 (*Railway Age*, June 14, page 12).

Roads Want Piggybacking Unfettered

Tell ICC that T-O-F-C service in all its forms involves experimentation of kind commission has suggested

The railroads last week advised the Interstate Commerce Commission that trailer-on-flat-car services call for such experimentation that no door to managerial discretion should be closed.

The advice was proffered by railroad counsel in their presentations at the June 28-29 oral argument on the 12 "basic and fundamental questions" posed by the commission in its general piggybacking case—No. 31375. (*Railway Age*, May 3, page 9.)

Generally, the railroad position is that no commission determination is called for in the present proceeding because the law is "well settled" on the basic questions, while answers to others cannot be given in the absence of a record of facts pertaining to existing t-o-f-c operations.

The basic question is whether the carriage of trailers on railroad flat cars is transportation by railroad or transportation by motor vehicle. The railroads say it is railroad transportation which they can now perform under proper tariff authority. American Trucking Associations and its Regular Common Carrier Conference say it is motor transportation which can be performed only by the holder of a motor carrier certificate under the Motor Carrier Act.

Meanwhile, ATA's Private Carrier Conference and the Private Trucking Council of America took the position that t-o-f-c is a railroad service which should be available to all shippers whether they use trailers of carriers or their own. The National Industrial Traffic League and the Freight Forwarders Institute also took the position that the law calls for an "open-door" situation.

The railroads' presentation in support of the "open-door" situation got under way with the argument of W. B. Johnson, counsel for eastern roads. All four types of t-o-f-c services have been in operation at one time or another during the past 25 years and none of them has ever been found unlawful by the commission, Mr. Johnson said.

The four types are the all-rail service, involving carriage by a railroad in its own trailers; open-tariff service, involving transportation by railroad of anybody's trailers; substituted service, involving operations limited to carriage of trailers of motor common carriers; and operations under joint rates.

The railroads hold that any of these services can be conducted under the Interstate Commerce Act and ICC decisions. When riding on flat cars, the trailers are "containers" and the fact that they have wheels is "immaterial," Mr. Johnson argued. He added that the operation whereby the Pennsylvania has carried demountable truck bodies has never been called a trucking operation.

The question of whether the railroads have a "legislative infirmity" requiring that they transfer lading was pointed up by the eastern roads' counsel as the "heart" of the matter. He thinks not, for he does not read the national transportation policy as a stipulation giving truckers a "vested right to prevent changes in railroad practices."

Hope to Learn—In making his plea for freedom to experiment, Mr. Johnson said the railroads hope to begin the job of learning the extent of potential economies in piggybacking. He went on to cite the commission's call upon the railroads to go in for "bold experimentation." That was in the commission's 1948 annual report. It said:

"Bold experimentation with new devices and methods seems to be required in some instances . . . . Imagination and ingenuity must be brought to the task. The responsibility for effecting improvements lies with the railroads. It will be our purpose, however, to furnish such help as may be possible."

Arguments on behalf of the western railroads were made by H. C. Barron and Amos Mathews. Their position was generally the same as that taken by Mr. Johnson on behalf of the eastern lines.

Nothing New—Mr. Barron said that railroads were hauling vehicles on flat cars as far back as "the 'eighties." If the ATA argument is correct, he insisted, it follows that a motor carrier needs a certificate as a rail carrier to participate in t-o-f-c operations. "The argument is just as good one way as the other," Mr. Barron added.

Mr. Mathews' argument was addressed principally to questions of "legislative history" raised by ATA. He took the position that all pertinent provisions of the Interstate Commerce Act were clear, and thus there was no justification for resort to legislative history.

ATA's counsel, James F. Pinkney, characterized the railroad approach as "narrowly legalistic." He went on to appeal for application of what he called the act's "broad policy."

Other interests represented at the argument included the Southern Pacific, which has an experimental t-o-f-c operation providing intrastate service in California; Brooklyn terminals whose counsel took the position that the railroads lacked authority to serve Brooklyn with t-o-f-c operations based on stations in New Jersey; and the Board of Trade of the City of Chicago

which asked that t-o-f-c service be denied any commodity eligible to be transported in trucking service exempt from regulation under the Motor Carrier Act's so-called agricultural exemptions.

Traffic

SP Passengers Ride Helicopters

Military airlift takes passengers from "Sunset Limited" marooned by washouts in Rio Grande flood—"Everybody seemed to enjoy the experience," SP spokesman says

When the eastbound "Sunset Limited" of the Southern Pacific left Los Angeles June 25, none of the 266 passengers aboard dreamed that part of their journey to New Orleans would be made by helicopter. But abnormally heavy rains in Texas along and north of the Rio Grande brought that river to record flood heights and marooned the SP streamliner at Langtry, when two large fills, one to the east and one to the west, washed out. Because all highway bridges in the area also were washed out, the SP found it could not remove passengers from the train with buses it had readied for the job. Upon advice of Texas Governor Alan Shivers, the company sought federal emergency aid through American Red Cross headquarters in Washington. In less than four hours, arrangements had been made for military inspection of the area from the air; the inspection was completed; a state of emergency was declared; and 14 helicopters were readied for the evacuation assignment by the Air Force base at San Marcos.

An SP spokesman said the airlift went off without a hitch. "Most of the passengers got 'a bang' out of the novel experience," he said. "No one was made ill by the ride and no one suffered any injury or inconvenience other than the delay. The train was safe on high ground.

"There was ample food and water in the diner and a reserve of power for lighting and air conditioning was at hand in a diesel freight locomotive also stranded at Langtry." He added that 87 passengers were removed on June 27 and the remainder went by air to Del Rio the next day. From there all were handled by relief trains to New Orleans.

"All Out Rebuilding"—"We hope to have service restored on the line by July 5 or 6," he continued. "Right now we have 50 pieces of earth-moving equipment from private contractors working to restore the damaged fills. Both were about 50 to 60 ft long and one of them was washed out from a height of 45 ft." Meanwhile SP trains are detouring between El Paso and Fort Worth via the Texas & Pacific and between Fort Worth and Houston on another SP route. The detour is taking about three hours longer, but passenger equipment turn-around times are such that all departures are being made on schedule. Stub trains are being operated between San Antonio and Houston, but a subsequent rise in the river at Del Rio rendered operation from that point east out of the question shortly after the relief trains cleared the city.

Laredo Bridge Out—A Missouri Pacific spokesman said operations in and out of Laredo were suspended at midnight June 29-30 because of two to twelve in. of backwater over depot and yard tracks of the subsidiary International-Great Northern. He said several spans of the bridge into Mexico, owned by the Texas Mexican, had been washed out and that interchange with the National of Mexico there was accordingly halted. He said all MP equipment was pulled out of danger and that little damage was anticipated when the waters recede. It was too early, he added, to predict what effect the waters might have upon MP operations in the lower Rio Grande valley area. Falcon dam, located between Laredo and the valley, was believed capable of holding back the record waters, he stated.

The Panhandle & Santa Fe, Santa Fe subsidiary which connects with the Kansas City, Mexico & Orient over the Rio Grande at Presidio, had not reported any trouble up to noon Wednesday, a Santa Fe spokesman in Chicago stated. Presidio is west of the general flood area. The International bridge at Eagle Pass, over which the Southern Pacific interchanges with the NofM, was also out of service, but at press time for this issue the SP was still operating into that city.

Iowa Drying Out—Virtually all services disrupted by the spot floods in Iowa and Minnesota (*Railway Age*, June 28, page 12) have been restored to normal. Embargoes by the North Western and Rock Island against shipments to the Cedar Rapids area have been lifted, although some traffic consigned to low-lying plants directly affected by floodwaters was being accepted subject to delay. The Fort Dodge, Des Moines & Southern, being without electric power, is handling freight service to all points with its own or rented diesel power. Passenger service remained suspended.

People in the News

Lyrla Becomes DTA Consultant

Keith H. Lyrla, assistant comptroller of the Illinois Central, has been appointed consultant to the Defense Transport Administration on mobilization transportation needs.

Defense Transport Administrator Owen Clarke announced Mr. Lyrla will assist in domestic transportation studies being made as part of the readiness program of the Office of Defense Mobilization.

William White Resigns From AAR Directorship

William White, former president of the New York Central, has resigned as a member of the board of directors of the Association of American Railroads. He had served on the board since December 12, 1946.

The vacancy will be filled on nomination by the Eastern Railroad Presidents Conference, an AAR announcement said.

Securities

$64,585,000 of B&O Bonds Sold by RFC

Before its death by Congressional mandate on June 30, the Reconstruction Finance Corporation sold its holdings of Baltimore & Ohio bonds, totaling $64,585,000, to that road and Glore, Forgan & Co.

The B&O took $4,585,000 of the bonds at par, and Glore, Forgan took $660,000,000 at 95 (plus accrued interest in both cases). RFC loans to B&O, beginning in April 1932, totaled more than those to any other railroad. With proceeds of the present sales, the RFC, its announcement said, "collected an amount equal to the entire principal of all its B&O loans, the entire cost to the RFC of the money thus employed and an additional amount of $37,490,289.62."

Illinois Central. — *Stock Option Plan.*—The ICC has authorized this

road to issue not exceeding 140,000 shares of common stock to be sold to officers and key employees under its Incentive Stock Option Plan (*Railway Age*, April 5, page 84, and May 31, page 16).

Northern Pacific.—*Stock Option Plan and Par Value Change.*—The ICC has approved conversion of this road's outstanding common stock from shares of $100 par value to a like number (2,480,000) of no-par shares. The same report authorized issuance of an additional 120,000 no-par shares to be sold to officers and key employees under the road's Restricted Stock Option Plan.

Authorization

ELGIN, JOLIET & EASTERN.—To issue $4,500,000 of unsecured promissory notes to its parent, the United States Steel Corporation (*Railway Age*, June 7, page 48).

Security Price Averages

	June 29	Prev. Week	Last Year
Average price of 20 representative railway stocks	67.30	66.71	63.82
Average price of 20 representative railway bonds	95.01	95.04	89.49

Dividends Declared

BANGOR & AROOSTOOK.—5% preferred, $1.25, quarterly, payable October 1 to holders of record September 7.

COLORADO & SOUTHERN.—4% non-cumulative 1st preferred, $2, payable July 26 to holders of record July 7; 4% non-cumulative 1st preferred, $2, payable September 22 to holders of record September 1.

LEHIGH VALLEY.—30¢, quarterly, payable July 20 to holders of record July 9.

MINNEAPOLIS & ST. LOUIS.—stock dividend, 33⅓%, payable July 28 to holders of record July 2.

NORFOLK & WESTERN.—common, 75¢, quarterly, payable September 10 to holders of record August 12; 4% adj. preferred, 25¢, quarterly, payable August 10 to holders of record July 15.

PITTSBURGH, CINCINNATI, CHICAGO & ST. LOUIS.—$2.50, semiannual, payable July 20 to holders of record July 9.

OVER 1,000 relatives of employees were guests of the Safety Car Heating & Lighting Co. at its "Family Day" June 18. A featured exhibit, which created considerable interest, was one of the New Haven's new M-U commuter cars (see page 27), which are equipped with many Safety products. Here J. J. Kennedy, vice-president of Safety Car, points to high and low pressure controls on the Safety air conditioning motor compressor unit installed on one of the new cars. Standing, left to right, are: H. F. Kneen, president, Safety Car Heating & Lighting Co.; C. Harry McGill, manager purchases and stores, New Haven; George Goebel, mechanical engineer, New Haven; Charles E. Hughes, manager, New England district, SCH&LCo.; and V. F. Dowden, assistant mechanical engineer, NH.

Supply Trade

Following a six-month test program of its equipment leasing plan, **Clark Equipment Company** has formed a new subsidiary, **Clark Leasing Corporation,** to finance leasing of its equipment on a national basis.

The **Heating & Cooling Materials Corp.,** New York has been appointed sales representative for the **Union Asbestos & Rubber Co.'s** heating and air conditioning units.

George R. Foster has been appointed general sales manager, stainless steel division, **United States Steel Supply division, U. S. Steel Corporation.**

A. M. Byers Company has appointed **William E. Weber** as field service engineer in the Seattle, Wash., area. Mr. Weber will work out of the firm's San Francisco division, with an office in Seattle.

Charles B. Cunningham has been named director of motor carrier sales of the **Rail-Trailer Company** at Chicago.

F. T. Richardson has resigned as director of public relations of **ACF Industries, Inc.,** but will continue to serve ACF temporarily as a consultant in public relations, especially in matters pertaining to the Talgo train.

H. E. Martin has been elected president and a director of **Metal & Thermit Corp.** Mr. Martin, presently manager of the New York district of **Babcock & Wilcox Co.,** will continue in that position until August 1.

Whiting Corporation has announced the following personnel changes: **Bernard L. Heinen** assigned to Houston district office; **Ernest V. Piazza** transferred from Cincinnati district sales office to St. Louis district office; **Charles D. Schmidt** assigned to New York district sales office; and **A. C. Patsavas** assigned to Cincinnati district sales office.

R. A. Mitchell has been appointed district engineer for the central district of the Air Brake division, **Westinghouse Air Brake Company,** with headquarters at Wilmerding, Pa.

Crane Company, which will be 100 years old on July 4, 1955, will celebrate its centennial at its Chicago general office, plants, branches and subsidiaries during that entire calendar year.

Railway Officers

CENTRAL OF GEORGIA.—**W. F. Leach,** division freight agent, has been appointed assistant freight traffic manager, with headquarters as before at Macon, Ga. **W. R. Wilson,** general agent at Cleveland, has been named assistant freight traffic manager—sales and service, at Savannah. **J. H. Parrish, III,** commercial agent at Montgomery, Ala., succeeds Mr. Wilson as general agent at Cleveland. **Paul Grahl,** commercial agent at Macon, replaces Mr. Leach as division freight agent there. **W. C. Bythewood,** commercial agent at Tampa, Fla., has been appointed assistant general freight agent—sales and service at Savannah. **J. F. McKemie** has been named general agent at Kansas City and the position of commercial agent there, which he formerly held, has been abolished.

CHICAGO & NORTH WESTERN.—**T. A. O'Donnell,** general freight agent—sales, has been advanced to assistant freight traffic manager—sales, with headquarters as before at Chicago. **O. Dale Peters** has been appointed general agent at Eau Claire, Wis., succeeding the late **L. B. Olson.**

NORFOLK & WESTERN.—**S. E. Sutherland,** general agent at Petersburg, Va., has retired after more than 52 years of service. **Louis C. Gibbs,**

(Continued on page 34)

Questions and Answers FOR THE TRANSPORTATION DEPARTMENT

Is there any ruling which prohibits a partly loaded tank car from being placed for movement in a fast freight train?

No. Stresses diminish as load decreases.

No. This subject has been studied by the Association of American Railroads, from a safety standpoint, on several occasions, but no ruling ever has been made.

V. R. Hawthorne, executive vice-chairman of the Mechanical Division, AAR, advises that recent impact tests made by the AAR Research Department to determine stresses at points in the car shell under full and part load conditions make it clear that even a small reduction from a full load in tank cars means a significant reduction in these stresses. While data from these tests are not ready for publication, Mr. Hawthorne states:

"It is evident that even a small reduction of 0.9% in the rail load of the striking (tank) car resulted in a significant reduction in stresses. This reduction of 0.9% involved removal of only 169 gal of water out of a total of 12,130 gal (tank shell full), leaving an outage of four inches from the top of the shell. This effect is no doubt the result of the mass of liquid in the tank not acting simultaneously with the mass of the car. A reduction of 13.2% in rail load resulted in greater than 50% reduction in stresses. This involved removal of 2,411 gal, leaving an outage of 15 in. from the top of the shell. . . ."

Mr. Hawthorne points out that these tests would seem to show that a relatively small tank car outage can result in an appreciable reduction in resultant stresses. It would appear also that there is a certain amount of energy absorption due to movement of water in the tank when the tank is not loaded shell-full. The complete report should be issued soon.

How much demurrage time is allowable in a case like this?

Standard free time of 48 hours.

An industry performing its own switching service received a loaded car at 10 a.m. March 1 and finished unloading it at 4 p.m. March 8. The consignee notified the railroad that the car would be used for outbound loading. When the car was partly loaded the order was cancelled, and the car was unloaded and delivered to the railroad empty at 5 p.m. March 11. To what free time is the industry entitled?

There should be but one demurrage transaction. The industry is allowed 48 hours free time from the first 7 a.m. after placement on interchange track until the car's return to that track. (See Rule 3, Section E of Agent Schuldt's freight tariff 4-Y.) Item 20-b of the demurrage tariff reads: "The disposition at point of detention determines the purpose for which a car is held and the rule applicable thereto. . ."—*Demurrage Committee, Eastern Association of Car Service Officers.*

•

American railroads have an enviable record for safety transporting huge quantities of explosives. Obviously, the carriers have an obligation to their employees, as well as to the public, to handle such traffic in the safest manner possible. As many of our readers know, rules for handling such dangerous commodities have been spelled out in Agent Campbell's explosives tariff. Believing, however, that proper handling of this traffic cannot be overemphasized, we'll run a quiz on the subject in this space July 19.—*G.C.R.*

Is there any relationship between per diem and demurrage charges? When one changes should the other be kept in its former relationship to the first?

There is no such relationship

In reality, there is no relationship between per diem and demurrage. The former is a rate based on cost of ownership, agreed upon by the railroads for rental of each other's cars; the latter is an equitable charge against shippers and consignees who detain cars beyond a reasonable period of free time allowed for loading or unloading. There is no reason for increasing or reducing the demurrage rate solely because of a change in the per diem rate or vice versa.—*Eastern Association of Car Service Officers.*

CONDUCTED BY G. C. RANDALL, district manager, Car Service Division (ret.), Association of American Railroads, this column runs in alternate weekly issues of this paper, and is devoted to authoritative answers to questions on transportation department matters. Questions on subjects concerning other departments will not be considered, unless they have a direct bearing on transportation functions. Readers are invited to submit questions, and, when so inclined, letters agreeing or disagreeing with our answers. Communications should be addressed to Question and Answer Editor, *Railway Age*, 30 Church Street, New York 7.

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Freight Operating Statistics of Large Railways — Selected Items

Region, Road and Year		Miles of road operated	Train-miles	Locomotive Miles: Principal and helper	Locomotive Miles: Light	Car Miles: Loaded (thousands)	Car Miles: Per cent loaded	Ton-miles (thousands): Gross excl.locos & tenders	Ton-miles (thousands): Net rev. and non-rev.	Road locos. on lines: Serviceable: Unstored	Road locos. on lines: Serviceable: Stored	Road locos. on lines: B.O.	Road locos. on lines: Per cent B.O.
New Eng. Region	Boston & Maine	1954	1,665	266,569	271,899	9,477	9,991	64.2	653,767	246,090	74	1	5	6.3
		1953	1,668	267,927	274,057	10,632	10,605	67.8	669,716	264,005	85	8	14	13.1
	N. Y., N. H. & Htfd	1954	1,747	295,014	295,025	16,762	12,062	66.7	742,814	289,071	81	..	6	6.9
		1953	1,764	310,735	310,911	21,333	12,784	70.4	762,052	309,554	93	..	4	4.1
Great Lakes Region	Delaware & Hudson	1954	793	196,923	202,248	10,923	9,095	64.1	636,256	309,815	44	..	1	2.2
		1958	793	213,379	220,509	12,542	10,335	66.0	721,442	360,116	42	21	13	17.1
	Del., Lack. & Western	1954	962	265,965	279,463	18,858	10,585	64.9	691,488	284,270	64	..	1	1.5
		1953	962	286,084	300,792	22,246	13,014	69.9	837,741	367,347	65	1	1	1.5
	Erie	1954	2,224	525,378	528,220	18,971	29,145	69.2	1,770,229	705,098	165	..	2	1.2
		1953	2,237	589,946	594,171	26,069	34,762	70.9	2,094,636	874,811	169	..	2	1.2
	Grand Trunk Western	1954	952	261,831	265,458	2,108	8,582	57.9	615,404	240,951	62	2	13	16.9
		1953	952	290,178	295,814	2,441	9,804	62.6	670,767	279,825	67	1	15	18.1
	Lehigh Valley	1954	1,150	205,413	208,709	7,042	9,712	64.1	653,575	284,149	30	2	2	5.9
		1953	1,151	223,432	227,128	7,684	11,503	69.8	750,198	348,475	31	1	1	3.0
	New York Central	1954	10,663	2,348,015	2,394,162	95,545	93,259	60.2	6,600,813	2,827,018	631	109	156	17.4
		1953	10,667	2,714,148	2,792,716	111,836	109,341	62.0	7,756,850	3,435,595	734	77	214	20.9
	New York, Chic. & St. L.	1954	2,161	673,932	695,043	6,518	25,951	62.1	1,816,037	758,828	171	42	37	14.8
		1953	2,160	798,569	825,971	8,234	31,056	65.2	2,159,290	934,810	202	3	38	15.6
	Pitts. & Lake Erie	1954	221	56,803	57,045	124	2,457	61.0	218,716	130,204	16	16	1	3.0
		1953	221	81,544	83,984	....	3,697	66.1	317,598	194,446	30	4	4	10.5
	Wabash	1954	2,381	528,159	529,545	7,089	22,566	64.1	1,476,080	557,420	108	1	..	..
		1953	2,381	533,544	536,362	8,582	24,433	68.9	1,546,988	628,843	105	17	34	21.8
Central Eastern Region	Baltimore & Ohio	1954	6,077	1,372,390	1,503,109	134,406	55,909	60.8	4,064,053	1,854,420	433	98	104	16.4
		1953	6,081	1,593,231	1,755,430	164,082	63,889	64.0	4,805,803	2,281,344	508	56	123	17.9
	Central of New Jersey	1954	209	38,754	39,022	49	1,334	59.8	146,824	90,120	11	6	..	..
		1953	213	49,282	48,722	114	2,120	62.2	233,930	147,560	14	25	3	7.1
	Central of Pennsylvania	1954	613	124,817	127,576	7,351	4,622	62.9	346,161	174,061	63	2	10	13.3
		1953	617	134,640	140,293	12,165	5,204	67.1	381,949	196,822	70	2	8	10.0
	Chicago & Eastern Ill.	1954	868	119,154	119,154	2,912	4,726	63.8	330,117	156,754	25	..	3	10.7
		1953	868	123,546	123,546	2,349	5,232	66.9	346,848	163,611	27	..	2	6.9
	Elgin, Joliet & Eastern	1954	236	87,127	87,866	28	2,734	63.2	216,301	115,058	31	6	4	9.8
		1953	236	108,088	109,508	322	3,629	65.0	286,786	155,341	41	..	..	..
	Pennsylvania System	1954	9,906	2,557,100	2,727,060	181,969	108,167	61.9	7,662,135	3,360,010	744	369	367	24.8
		1953	9,941	3,028,826	3,219,790	265,185	129,123	65.2	8,976,190	4,107,790	946	213	371	24.2
	Reading	1954	1,305	311,342	316,820	13,563	11,986	59.8	953,499	475,698	168	42	18	7.9
		1953	1,309	358,539	366,536	21,912	13,722	63.1	1,046,937	536,419	168	15	22	10.7
	Western Maryland	1954	857	154,305	164,006	10,257	5,783	62.7	476,217	263,478	61	27	2	2.2
		1953	873	186,896	215,120	23,173	6,544	65.2	528,975	297,997	109	15	8	6.1
Pocahontas Region	Chesapeake & Ohio	1954	5,023	1,149,526	1,170,076	28,848	45,599	56.8	3,715,034	1,994,791	365	93	154	25.2
		1953	5,036	1,244,489	1,273,188	35,909	54,391	58.6	4,496,598	2,419,178	383	61	188	29.7
	Norfolk & Western	1954	2,113	587,600	617,412	41,635	25,759	59.2	2,281,916	1,211,606	204	51	23	8.3
		1953	2,113	635,683	667,142	43,777	28,859	59.6	2,487,848	1,318,114	221	25	26	9.6
Southern Region	Atlantic Coast Line	1954	5,354	850,260	850,260	10,286	27,537	56.5	2,042,259	884,533	238	..	7	2.9
		1953	5,367	906,691	906,715	11,245	29,864	61.0	2,130,192	957,630	245	..	4	1.6
	Central of Georgia	1954	1,731	204,377	204,404	2,661	7,658	67.3	521,488	245,729	69	..	3	4.2
		1953	1,754	217,125	227,853	3,137	8,477	68.1	576,766	272,007	78	15	..	..
	Gulf, Mobile & Ohio	1954	2,718	302,764	302,764	255	15,940	64.7	1,104,373	497,159	87	..	2	2.2
		1953	2,718	322,131	322,131	56	17,473	71.4	1,141,398	546,672	86	..	3	3.4
	Illinois Central	1954	6,537	1,322,659	1,324,390	44,160	47,342	62.2	3,385,747	1,508,336	500	61	74	11.7
		1953	6,539	1,516,513	1,522,016	51,153	53,989	63.7	3,841,398	1,743,515	545	26	81	12.4
	Louisville & Nashville	1954	4,722	870,830	885,877	17,083	30,309	61.8	2,258,706	1,114,640	227	82	37	10.7
		1953	4,728	964,551	1,008,961	22,394	34,748	63.3	2,550,209	1,265,195	248	67	34	9.7
	Nash., Chatt. & St. Louis	1954	1,032	195,559	201,320	5,253	6,528	64.6	450,122	205,014	47	..	6	11.3
		1953	1,032	217,159	221,663	3,784	7,289	72.1	475,285	228,484	50	..	3	5.7
	Seaboard Air Line	1954	4,067	669,242	669,242	3,282	27,138	60.7	1,993,458	872,644	141	..	9	6.0
		1953	4,070	717,252	717,252	1,256	28,329	64.5	1,997,160	877,132	146	60	20	8.8
	Southern	1954	6,262	950,156	950,212	11,819	39,854	65.2	2,611,018	1,146,329	272	..	2	.7
		1953	6,263	1,028,418	1,028,445	12,666	42,410	70.6	2,656,390	1,214,698	247	30	20	6.7
Northwestern Region	Chicago & North Western	1954	7,850	703,552	705,886	10,949	27,595	65.0	1,848,199	855,445	175	40	91	29.7
		1953	7,849	748,417	751,504	14,765	30,505	67.0	2,058,900	945,655	277	32	93	23.1
	Chicago Great Western	1954	1,437	135,700	135,700	184	7,692	68.0	511,585	228,553	30	..	3	9.1
		1953	1,435	64,642	64,642	95	4,139	77.1	255,219	119,481	31	..	3	8.8
	Chic., Milw., St. P. & Pac.	1954	10,631	982,090	997,861	24,420	41,112	64.2	2,786,544	1,219,940	302	102	41	9.2
		1953	10,662	1,080,457	1,110,514	35,345	46,326	65.8	3,107,048	1,380,583	346	89	57	11.6
	Chic., St. P., Minn. & Omaha	1954	1,606	167,076	168,687	4,951	5,093	64.8	352,168	150,763	62	7	22	24.2
		1953	1,606	185,646	188,613	5,742	5,741	65.6	399,454	179,267	64	..	28	30.4
	Duluth, Missabe & Iron Range	1954	566	33,142	33,200	472	485	51.2	42,691	18,455	34	13	22	31.9
		1953	567	56,023	56,477	718	1,663	47.1	158,639	86,948	58	2	5	7.7
	Great Northern	1954	293	1,004,015	1,009,881	29,194	38,889	66.9	2,693,780	1,220,081	254	202	49	9.7
		1953	8,291	1,086,388	1,089,113	31,080	42,000	69.3	2,839,502	1,311,869	291	171	61	11.7
	Minneap., St. P. & S. S. M.	1954	4,169	372,533	374,811	4,050	11,709	71.2	727,426	341,299	96	4	18	15.3
		1953	4,172	402,779	407,752	4,579	13,513	66.1	892,137	413,545	104	4	17	13.6
	Northern Pacific	1954	6,570	820,107	844,855	32,501	32,398	66.5	2,197,018	949,958	295	55	64	15.5
		1953	6,585	813,294	841,260	34,233	34,178	72.1	2,272,335	1,060,687	282	29	89	22.3
Central Western Region	Atch., Top. & S. Fe (incl. G. C. & S. F. and P. & S. F.)	1954	13,067	2,242,614	2,296,977	58,583	100,311	64.0	6,758,289	2,565,322	509	150	41	5.9
		1953	13,094	2,639,450	2,751,632	97,630	117,613	64.8	7,892,118	3,090,617	551	128	58	7.9
	Chic., Burl. & Quincy	1954	8,832	1,110,029	1,108,717	37,313	46,531	67.9	3,018,909	1,333,607	268	71	52	13.3
		1953	8,833	1,169,724	1,171,640	39,028	50,101	69.0	3,222,830	1,471,937	311	53	111	23.4
	Chic., Rock I. & Pac.	1954	7,861	944,505	945,816	1,750	36,344	60.3	2,606,886	1,045,293	173	1	9	4.9
		1953	7,895	1,027,800	1,026,480	6,791	41,908	62.9	2,936,289	1,195,653	171	8	16	8.2
	Denver & R. G. Wn.	1954	2,164	268,371	284,423	33,563	12,633	69.0	864,082	403,735	55	60	23	16.7
		1953	2,313	314,676	344,703	36,366	15,679	71.5	1,066,600	514,720	73	41	38	25.0
	Southern Pacific	1954	8,065	1,997,145	2,092,439	229,800	88,762	63.3	6,154,117	2,553,406	537	157	132	16.0
		1953	8,058	2,166,677	2,274,976	253,250	99,303	67.2	6,594,270	2,780,222	640	70	147	17.2
	Union Pacific	1954	9,816	2,246,990	2,295,252	132,361	96,054	63.4	6,508,931	2,654,036	484	287	83	9.7
		1953	9,824	2,459,614	2,553,825	180,663	107,079	68.9	7,075,726	3,124,480	550	117	147	18.1
	Western Pacific	1954	1,190	202,286	203,725	18,271	9,234	70.4	597,700	271,281	40	4	3	6.4
		1953	1,190	255,850	263,939	25,403	12,108	69.4	810,534	369,661	39	9	5	9.4
Southwestern Region	International-Gt. Northern*	1954	1,103	146,175	146,175	....	5,580	63.5	391,044	175,980	44	..	2	4.3
		1953	1,104	167,094	167,094	....	7,285	64.1	484,500	213,222	52	6	3	4.9
	Kansas City Southern	1954	886	151,811	151,815	248	8,224	65.6	581,088	261,194	26	..	1	3.7
		1953	886	174,116	174,116	111	9,382	67.7	648,109	299,945	26	1	3	10.0
	Mo.-Kans.-Texas Lines	1954	3,230	357,590	357,590	4,105	13,885	63.8	899,046	380,395	87	..	1	1.1
		1953	3,230	391,357	391,357	4,428	15,484	64.8	1,005,861	404,944	90	12	7	6.4
	Missouri Pacific*	1954	6,904	1,117,181	1,119,117	12,799	43,839	65.1	2,958,442	1,271,677	262	39	82	21.4
		1953	6,917	1,252,227	1,256,700	14,538	50,006	66.3	3,369,439	1,473,218	304	31	50	13.0
	Texas & Pacific	1954	1,827	320,288	320,288	3,616	14,202	61.1	1,021,487	379,097	61	..	..	..
		1953	1,831	378,410	378,410	3,593	15,917	61.4	1,127,539	421,764	61	..	..	..
	St. Louis-San Francisco	1954	4,564	635,366	637,292	6,188	24,142	62.8	1,682,220	740,449	188	..	5	2.6
		1953	4,567	644,202	645,117	6,243	25,491	64.6	1,730,384	762,962	187	..	2	1.1
	St. Louis Southw. Lines	1954	1,555	300,175	300,189	4,020	14,090	69.3	880,212	393,467	57	14	4	5.3
		1953	1,561	350,690	350,706	4,817	16,832	71.9	1,018,230	455,163	63	21	5	5.6
	Texas & New Orleans	1954	4,279	700,657	700,657	9,129	26,977	62.0	1,907,017	798,268	150	..	47	23.9
		1953	4,279	767,844	773,556	16,990	30,446	68.5	2,005,523	895,117	204	..	27	11.7

For the Month of March 1954 Compared with March 1953

Region, Road and Year		Freight cars on line: Home	Foreign	Total	Per Cent B.O.	G.t.m.per train-hr. excl.locos. and tenders	G.t.m.per train-mi. excl.locos. and tenders	Net ton-mi. per train-mile	Net ton-mi. per l'd car-mile	Net ton-mi. per car-day	Car miles per car-day	Net daily ton-mi. per road-mi.	Train-miles per train-hour	Miles per loco. per day
New Eng. Region	Boston & Maine 1954	2,921	7,243	10,164	3.3	41,258	2,457	925	24.6	786	49.7	4,768	16.8	124.9
	1953	1,485	8,407	9,892	2.5	42,565	2,504	987	24.9	891	52.8	5,106	17.0	94.5
	N. Y., N. H. & Htfd. 1954	3,017	13,109	16,126	2.5	42,925	2,518	980	24.0	580	36.3	5,338	17.0	132.8
	1953	1,789	14,446	16,235	2.2	38,501	2,452	996	24.2	637	37.4	5,661	15.7	130.1
Great Lakes Region	Delaware & Hudson 1954	7,792	3,941	11,733	4.5	61,296	3,249	1,582	34.1	844	38.6	12,603	19.0	167.5
	1953	6,731	4,452	11,183	6.3	65,765	3,398	1,696	34.8	1,015	44.1	14,649	19.5	103.8
	Del., Lack. & Western 1954	8,947	7,343	16,290	4.7	46,801	2,646	1,088	26.9	558	32.0	9,532	18.0	161.8
	1953	6,832	9,446	16,278	4.3	52,192	2,970	1,302	28.2	758	38.4	12,318	17.8	160.8
	Erie 1954	12,981	13,138	26,119	4.5	63,092	3,397	1,353	24.2	869	51.9	10,227	18.7	116.4
	1953	9,804	17,319	27,123	3.3	65,797	3,583	1,496	25.2	997	55.9	12,615	18.5	129.3
	Grand Trunk Western 1954	3,992	7,582	11,574	4.3	50,642	2,360	924	28.1	658	40.5	8,165	21.5	120.6
	1953	3,325	8,774	12,099	5.0	49,130	2,329	971	28.5	780	43.6	9,482	21.3	126.9
	Lehigh Valley 1954	9,577	6,425	16,002	5.4	64,852	3,208	1,395	29.3	575	30.6	7,971	20.4	219.4
	1953	7,619	9,151	16,770	4.5	70,988	3,395	1,577	30.3	681	32.2	9,766	21.1	245.7
	New York Central 1954	87,073	72,423	159,496	9.3	49,853	2,848	1,220	30.3	564	30.9	8,552	17.7	101.1
	1953	72,905	89,277	162,182	7.6	50,069	2,910	1,289	31.4	681	34.9	10,390	17.5	100.2
	New York, Chic. & St. L. 1954	10,558	11,942	22,500	6.8	49,774	2,725	1,139	29.2	1,072	59.1	11,327	18.5	100.0
	1953	8,728	15,757	24,485	5.7	49,637	2,739	1,186	30.1	1,213	61.8	13,961	18.4	119.8
	Pitts. & Lake Erie 1954	9,348	5,581	14,929	5.4	59,922	3,850	2,292	53.0	304	9.4	19,005	15.6	61.8
	1953	4,960	8,641	13,601	5.4	56,202	3,895	2,385	52.6	454	13.1	28,382	14.4	80.7
	Wabash 1954	9,907	9,409	19,316	7.3	65,008	2,811	1,062	24.7	932	58.9	7,552	23.3	168.7
	1953	8,136	11,022	19,158	8.3	66,159	2,918	1,186	25.7	1,086	61.3	8,520	22.8	116.8
Central Eastern Region	Baltimore & Ohio 1954	62,549	35,410	97,959	8.9	46,783	2,992	1,365	33.2	639	31.7	9,844	15.8	88.1
	1953	54,770	40,240	95,010	7.3	45,858	3,053	1,449	35.7	767	33.6	12,102	15.2	93.0
	Central of New Jersey 1954	9,440	482	9,922	7.0	63,150	3,922	2,408	67.6	299	7.4	13,910	16.7	88.0
	1953	7,876	933	8,809	7.3	75,050	4,921	3,104	69.6	524	12.1	22,347	15.8	44.7
	Central of Pennsylvania 1954	5,640	7,817	13,457	12.0	39,341	2,911	1,464	37.7	405	17.1	9,160	14.2	83.1
	1953	4,574	10,186	14,760	6.4	38,792	2,993	1,542	37.8	438	17.3	10,290	13.7	82.3
	Chicago & Eastern Ill. 1954	3,541	2,747	6,288	5.0	48,675	2,778	1,319	33.2	814	38.4	5,826	17.6	152.6
	1953	3,326	3,436	6,762	5.8	47,657	2,832	1,336	31.3	778	37.2	6,080	17.0	149.7
	Elgin, Joliet & Eastern 1954	6,854	7,273	14,127	5.6	21,864	2,603	1,384	42.1	255	9.6	15,727	8.8	92.4
	1953	7,582	11,095	18,677	5.0	20,915	2,772	1,502	42.8	265	9.5	21,233	7.9	114.3
	Pennsylvania System 1954	109,373	93,754	203,127	9.5	54,435	3,073	1,348	31.1	533	27.7	10,942	18.2	69.6
	1953	106,137	98,085	204,222	8.6	51,637	3,041	1,392	31.8	654	31.5	13,330	17.4	81.1
	Reading 1954	21,738	13,279	35,017	5.6	43,942	3,066	1,530	39.7	444	18.7	11,759	14.3	56.9
	1953	17,351	16,688	34,039	5.2	40,994	2,921	1,497	39.1	503	20.4	13,219	14.0	73.1
	Western Maryland 1954	8,988	2,702	11,690	5.2	44,820	3,132	1,733	45.6	746	26.1	9,917	14.5	68.9
	1953	8,012	2,626	10,638	4.3	41,965	2,899	1,633	45.5	909	30.6	11,011	14.8	63.4
Pocahontas Region	Chesapeake & Ohio 1954	61,542	20,079	81,621	5.1	60,736	3,246	1,743	43.7	806	32.4	12,811	18.8	69.0
	1953	56,217	24,404	80,621	2.4	65,846	3,633	1,954	44.5	987	37.9	15,496	18.2	72.1
	Norfolk & Western 1954	43,546	6,036	49,582	2.6	67,594	3,959	2,102	47.0	790	28.4	18,497	17.4	84.5
	1953	37,052	6,833	43,885	2.7	67,778	3,979	2,108	45.7	955	35.1	20,123	17.3	92.0
Southern Region	Atlantic Coast Line 1954	21,358	15,066	36,424	2.3	41,801	2,419	1,048	82.1	765	42.2	5,329	17.4	126.5
	1953	16,043	19,173	35,216	2.1	39,100	2,360	1,061	32.1	861	44.0	5,756	16.6	133.0
	Central of Georgia 1954	4,078	5,079	9,157	3.9	46,445	2,563	1,208	32.1	852	39.5	4,579	18.2	103.2
	1953	2,796	7,198	9,994	4.4	45,917	2,668	1,258	32.1	894	40.9	5,003	17.3	86.6
	Gulf, Mobile & Ohio 1954	6,511	8,692	15,203	4.0	74,812	3,650	1,643	31.2	1,035	51.3	5,900	20.5	117.2
	1953	4,742	9,597	14,339	2.7	70,793	3,559	1,705	31.3	1,231	55.1	6,488	20.0	124.8
	Illinois Central 1954	35,237	18,232	53,469	3.2	45,005	2,593	1,155	31.9	907	45.8	7,443	17.6	74.8
	1953	27,305	25,434	52,739	2.2	44,674	2,572	1,167	32.3	1,071	52.1	8,601	17.6	84.0
	Louisville & Nashville 1954	42,572	11,446	54,018	2.9	45,036	2,601	1,283	36.8	669	29.4	7,615	17.4	91.8
	1953	39,017	15,173	54,190	3.1	44,318	2,649	1,314	36.4	769	33.4	8,632	16.8	102.9
	Nash., Chatt. & St. Louis 1954	4,090	3,768	7,858	2.9	44,351	2,313	1,054	31.4	824	40.6	6,408	19.3	134.1
	1953	2,382	4,143	6,525	2.5	43,745	2,193	1,054	31.3	1,058	46.8	7,142	20.0	147.4
	Seaboard Air Line 1954	14,995	13,676	28,671	1.7	53,887	3,033	1,328	32.2	981	50.3	6,922	18.1	172.0
	1953	10,985	16,281	27,266	2.3	51,823	2,827	1,242	31.0	1,032	51.7	6,952	18.6	119.2
	Southern 1954	19,887	23,226	43,113	3.2	48,718	2,758	1,211	28.8	833	44.4	5,905	17.7	125.5
	1953	16,640	26,908	43,548	3.5	45,105	2,597	1,187	28.6	889	44.0	6,256	17.5	123.1
Northwestern Region	Chicago & North Western 1954	22,475	22,771	45,246	5.8	47,335	2,700	1,250	31.0	589	29.3	3,515	18.0	83.7
	1953	19,627	25,430	45,057	4.9	48,970	2,844	1,306	31.0	672	32.3	3,886	17.8	67.2
	Chicago Great Western 1954	2,131	3,579	5,710	3.6	72,095	3,784	1,690	29.7	1,287	63.7	5,131	19.1	138.8
	1953	1,165	5,057	6,222	3.0	68,885	3,971	1,859	28.9	780	35.0	2,677	17.4	64.5
	Chic., Milw., St. P. & Pac. 1954	38,530	26,121	64,651	6.4	52,350	2,848	1,247	29.7	599	31.4	3,702	18.5	79.5
	1953	33,315	31,070	64,385	4.1	50,944	2,892	1,285	29.8	677	34.5	4,177	17.7	80.1
	Chic., St. P., Minn. & Omaha 1954	1,170	6,819	7,989	5.0	33,604	2,146	919	29.6	598	31.2	3,028	15.9	71.4
	1953	1,189	7,626	8,815	4.1	33,832	2,213	993	31.2	633	30.9	3,601	15.7	77.7
	Duluth, Missabe & Iron Range 1954	14,782	520	15,302	1.7	19,282	1,365	590	38.1	39	2.0	1,052	15.0	16.8
	1953	14,450	1,064	15,514	4.0	44,851	3,110	1,705	52.3	200	8.1	4,947	15.8	31.0
	Great Northern 1954	26,168	17,983	44,151	3.4	50,660	2,695	1,221	31.4	847	40.4	4,746	18.9	73.1
	1953	23,564	20,331	43,895	4.6	48,214	2,628	1,214	31.2	976	45.1	5,104	18.4	75.3
	Minneap., St. P. & S. S. M. 1954	7,953	5,632	13,585	5.6	40,321	1,954	917	29.1	800	38.5	2,641	20.6	111.5
	1953	6,585	7,073	13,658	7.2	43,604	2,231	1,034	30.6	918	45.4	3,198	19.7	114.8
	Northern Pacific 1954	22,842	12,731	35,573	5.6	51,944	2,701	1,168	29.3	838	43.0	4,664	19.4	73.7
	1953	19,230	15,689	34,919	3.7	53,638	2,815	1,314	31.0	978	43.7	5,196	19.2	76.5
Central Western Region	Atch., Top. & S. Fe (incl. G. C. & S. F. and P. & S. F.) 1954	56,586	32,711	89,297	3.0	71,261	3,022	1,147	25.6	946	57.8	6,333	23.6	114.4
	1953	47,793	33,538	81,331	3.8	68,838	2,999	1,174	26.3	1,225	71.9	7,614	23.0	130.2
	Chic., Burl. & Quincy 1954	23,231	18,917	42,148	2.9	56,825	2,724	1,203	28.7	1,016	52.2	4,871	20.9	103.0
	1953	18,476	23,524	42,000	3.4	58,653	2,761	1,261	29.4	1,138	56.1	5,376	21.3	86.5
	Chic., Rock I. & Pac. 1954	14,120	20,197	34,317	4.8	54,801	2,765	1,109	28.8	956	55.1	4,289	19.9	177.0
	1953	12,029	22,481	34,510	4.3	55,203	2,867	1,168	20.5	1,084	60.4	4,885	19.3	178.4
	Denver & R. G. Wn. 1954	9,314	4,077	13,391	3.7	64,793	3,226	1,507	32.0	997	45.2	6,018	20.1	77.9
	1953	7,704	6,279	13,983	3.6	62,207	3,402	1,642	32.8	1,167	49.7	7,179	18.4	84.0
	Southern Pacific 1954	34,231	49,930	84,161	1.7	60,340	3,106	1,288	28.8	1,091	59.9	10,213	19.6	97.8
	1953	30,612	42,878	73,490	2.6	55,772	3,068	1,293	28.0	1,185	63.0	11,130	18.3	100.4
	Union Pacific 1954	34,162	29,310	63,472	2.5	75,057	2,933	1,196	27.6	1,373	78.4	8,722	25.9	93.8
	1953	29,943	32,945	62,888	2.4	70,125	2,914	1,287	29.2	1,589	79.0	10,260	24.4	112.8
	Western Pacific 1954	3,013	2,621	5,634	5.3	75,706	2,975	1,350	29.4	1,628	78.7	7,354	25.6	162.4
	1953	2,467	3,880	6,347	5.1	78,056	3,192	1,456	30.5	1,926	90.8	10,021	24.6	186.1
Southwestern Region	International-Gt. Northern* 1954	890	5,315	6,205	4.1	54,829	2,682	1,207	31.5	921	46.0	5,147	20.5	108.1
	1953	923	7,944	8,867	2.5	59,426	2,917	1,284	29.3	775	41.3	6,230	20.5	93.1
	Kansas City Southern 1954	1,224	5,583	6,807	3.0	80,372	3,837	1,725	31.8	1,197	57.4	9,510	21.0	201.8
	1953	1,016	5,914	6,930	4.0	76,936	3,737	1,729	32.0	1,319	60.9	10,921	20.7	206.9
	Mo.-Kans.-Texas Lines 1954	5,389	6,006	11,395	5.7	54,320	2,520	1,066	27.4	1,074	61.5	3,799	21.6	142.2
	1953	4,194	7,102	11,296	3.9	53,960	2,579	1,038	26.2	1,126	66.4	4,044	21.0	124.2
	Missouri Pacific* 1954	20,283	14,450	34,733	2.9	60,024	2,658	1,142	29.0	1,195	63.3	5,942	22.7	100.9
	1953	17,277	17,169	34,446	3.5	60,205	2,706	1,183	29.5	1,382	70.7	6,870	22.4	114.7
	Texas & Pacific 1954	3,635	6,016	9,651	4.3	72,714	3,195	1,186	26.7	1,253	76.9	6,693	22.8	179.6
	1953	2,787	7,118	9,905	4.3	69,558	2,981	1,115	26.5	1,295	79.6	7,431	23.3	219.0
	St. Louis-San Francisco 1954	17,084	11,297	28,381	2.4	50,616	2,652	1,167	30.7	807	41.9	5,233	19.1	118.2
	1953	13,597	12,264	25,861	3.4	48,187	2,691	1,186	29.9	982	50.8	5,389	17.9	122.2
	St. Louis Southw. Lines 1954	2,726	3,845	6,571	1.9	60,083	2,935	1,312	27.9	1,875	96.8	8,162	20.5	143.1
	1953	2,655	5,198	7,853	1.3	62,285	2,906	1,299	27.0	1,959	100.8	9,406	21.5	138.6
	Texas & New Orleans 1954	7,265	14,013	21,278	1.5	55,051	2,741	1,147	29.6	1,165	63.4	6,018	20.2	121.9
	1953	5,619	15,203	20,822	1.1	52,214	2,634	1,176	29.4	1,320	65.5	6,748	20.0	116.8

*Report of trustee or trustees.

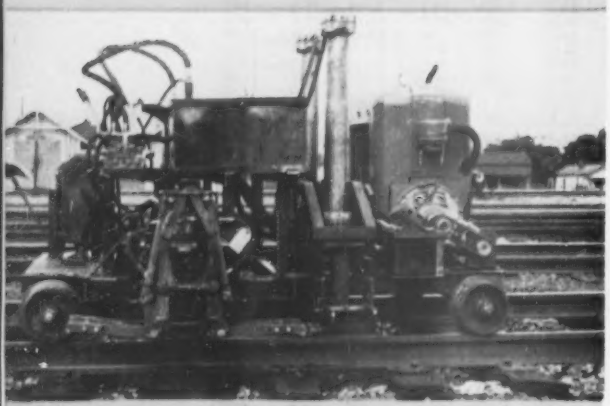
Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission. Subject to revision.

BALLAST REGULATOR, SCARIFIER AND PLOW

Saves 10 Men — Monthly Rental $350

TRACK BROOM

Saves 10 Men — Monthly Rental $225



TIE REPLACER

Saves Eight Men — Monthly Rental $264

TRACK CRANE

Saves Four Men — Monthly Rental $129

RAILROA

Leas

ANOTHER PROGRESSIV

Kershaw Trackwork Maintenan
Savings on Your Present Operat
A PENNY RENTAL! It's as Simp

Here's the Answer to Declining Re

A foolproof guarantee to save you money and increase the amount of dividends your road can afford to pay — that's the guarantee offered by Kershaw Manufacturing Company whenever you lease any of its machines.

What with maintenance costs going up and revenue going down, it's a plan your railroad can't afford to miss.

Here's the way it works:

You can lease any one of these seven Kershaw trackwork machines for as long as three years. If, after 30 days, you don't agree that the rental plus operating expenses on the machine are less than you're paying now to do the same job, just return the machine.

And remember! ALL RENTALS CAN BE CHARGED OFF AS OPERATING COSTS!

KERSHAW MANUFACTURING COMPANY, INC.
MONTGOMERY, ALABAMA

MACHINERY RENTAL AGREEMENT

In consideration of the mutual agreements herein contained, the undersigned lessor does hereby let and lease to the undersigned lessee for the term and under the agreements herein provided, the machinery herein described, and the lessee agrees to pay rental therein and otherwise perform as herein set out.

1. The machinery is described as follows:

2. The term of the lease shall begin on the date the machinery is delivered to the carrier in Montgomery, Alabama, who shall be the agent, for the lessee, and said term shall end three years from that date. The date shown on the receipt for the machinery issued by the carrier shall be final evidence as to the date of the beginning of said term. All transportation and delivery charges both for shipment to the lessee and for return to the lessor at the end of the term shall be payable by the lessee and any such charges prepaid by lessor shall be promptly reimbursed by the lessee. The Railroad Company may return the machine during the first 30 days rental period. In the event the savings do not pay the rental and operating costs, plus to lessee free of charge, the necessary parts to remedy any such defects and also reimburse lessee for the expense of installing said parts provided the annual term to maintain said machinery in good repair, reasonable wear and tear excepted, and all taxes during the said term or broken parts against said machinery. Lessee shall be fully responsible to lessor for the safety of said machinery and be responsible for loss or destruction of the machinery caused by fire, theft, collision, upset, lightning, storm or any other cause whatever, whether within the control of the lessee or not, and such loss or destruction shall not in any way relieve the lessee of the obligation to pay all the rental herein provided for when the same is due.

3. The lessor covenants with the lessee that the machinery is free from defects resulting from defective material or workmanship and lessor will, upon request by lessee at any time within the term of said lease, ship to lessee free of charge, the necessary parts to remedy any such defects and also reimburse lessee for the expense of installing said parts provided the annual term to maintain said machinery in good repair, reasonable wear and tear excepted, and all taxes during the said term or broken parts against said machinery. Lessee shall be fully responsible to lessor for the safety of said machinery and be responsible for loss or destruction of the machinery caused by fire, theft, collision, upset, lightning, storm or any other cause whatever, whether within the control of the lessee or not, and such loss or destruction shall not in any way relieve the lessee of the obligation to pay all the rental herein provided for when the same is due.

4. Lessee agrees to pay the lessor, or its order, at the First National Bank, P. O. Box 511, Montgomery, Alabama, rental of _____ per month payable in advance and starting on the date of the beginning of the term as hereinbefore provided and monthly thereafter. In event of default in the payment of any installment and if said default shall continue for ten days after written notice by registered mail posted and addressed to the lessee at the address hereinafter shown, lessor may at its option either declare all remaining rental installments due and payable, and shall have the right to collect all of said remaining installments and all other rights available to a lessor under the laws of any state having jurisdiction or immediately terminate this lease and repossess the machinery. As against the obligation to pay said rental installments lessee waives all right of demand, possessment, and notice, except as aforesaid, and agrees that in event of default it will pay all costs of collection, including a reasonable attorney's fee of at least fifteen percent of the amount then due or matured.

5. This rental agreement is made at Montgomery, Alabama, and shall be construed under the laws of that state.

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be executed in their respective behalves by persons lawfully authorized thereto, on this _____ day of _____, 19____.

KERSHAW MANUFACTURING COMPANY, Inc.

By _____

As its _____ Lessor

By _____

As its _____ Lessee

Address of lessee is

_____

_____

Kersha

D EXECUTIVES . . .

YOUR TRACK MAINTENANCE EQUIPMENT
PAY FOR IT WITH SAVINGS!

E STEP BY KERSHAW!

Machines GUARANTEE You
ns OR YOU DON'T HAVE TO PAY
as That—NO SAVING, NO RENT!

nue without Capital Expenditures

THREE PLANS

1. **Three-Year Lease — Lease Kershaw machines for three years.**
2. **Six To 12 Months Rental With Option To Purchase — Lease a Kershaw machine for six to 12 months. Any time during that period you can purchase the machine with 90 per cent of rentals applying to the purchase price.**
3. **Outright Purchase.**

The Railroad Company may return machine during the first 30 days ntal period in the event the savings do not pay the rental and operating costs.

TOTAL RENTALS

For the Ballast Regulator, Track Crane, Tie Replacer and Jackall — all equipment necessary for track reconditioning or rehabilitation except the multiple tamper—only $1,031 per month*

COMPARE THIS FIGURE WITH WHAT YOU'RE PAYING NOW FOR THE SAME JOB!

*Based on Three-Year Lease rentals

KRIBBER

Saves Three Men — Monthly Rental $66

JACKALL

Saves Six Men — Monthly Rental $425 for Super Jackall; $288 for Intermediate Jackall

HYDRAULIC JACK

Saves Two Men — Monthly Rental $119 for Super Jack; $90 for Standard Jack

KERSHAW

TRACK EQUIPMENT LEASE

anufacturing Co., Inc. P. O. Box 510, Montgomery, Ala.

paint-up clean-up center for GATX tank cars

Forty tank cars can be serviced in this paint shop at one time. Every surface—interior and exterior—that can be painted, sprayed or brushed gets its protective covering here. After the car has gone through the mechanical department for necessary maintenance and repair work the important car reporting marks, advertising decoration and other stencilled information are applied. These surface finishes applied at the General American car repair shops increase the usefulness of the 47,000 GATX tank cars and keep cars available for duty.

To keep the fleet rolling, General American's more than 30 car repair shops work with the Engineering and Traffic departments to give shippers more dependable service for transporting liquids in bulk.

Car repair shops throughout the U. S. A.

GATX GENERAL AMERICAN TRADE MARK

GENERAL AMERICAN TRANSPORTATION CORPORATION
135 South La Salle Street, Chicago 90, Illinois
Offices in principal cities

Suppliers Speak Out As Railroad Advocates

The publicity program in behalf of the railroads by the so-called "Committee of Railroad Suppliers" attained its initial goal in a press luncheon, with attendant publicity, at New York on June 30, at which the speaker was Benjamin F. Fairless, chairman of the United States Steel Corporation. The committee's program has been intelligently conceived; and certainly, in this form or some other, it is nothing but common sense that there should be organized effort by suppliers to advance the welfare of the industry from which they derive their livelihood. Some suppliers of the truck operators, incidentally, have been far more ardent advocates than railway suppliers have—more enthusiastic, even, than the truck operators themselves.

The reason railway suppliers have not been more active in this direction is, probably, that the railroads themselves have usually been slow to give specific answers to the question: "What do you want us suppliers to do for you?" In the trucking business (unlike the railroads), the suppliers are bigger than their customers and, most likely, do not find it necessary to consult their customer's wishes as to details before they start talking out loud in public.

In the field of railroad advocacy, the Railway Business Association has for many years pursued a consistent and dependable—but not spectacular—program. This association testifies for the railroads in the interest of desired legislation, and regularly issues pamphlet literature to its own members and others, in explanation of railroad objectives. The fact that the RBA's efforts have been modest in tone and little publicized has occasionally led to some criticism by those inclined to compare unfavorably the temperate zeal of railroad suppliers for their customers' cause, with the often raucous advocacy of some suppliers of the trucking people.

At length, now, a relatively small group of important suppliers has got together in this "Committee of Railroad Suppliers" and has initiated the present publicity campaign. This group did not call upon the railroads to study, analyze and present the information and prepare the "copy" for them. They did all these difficult chores for themselves—all the time, however, taking care to "clear" what they were doing with responsible railroad officers.

This group has not scattered its fire. It is not aiming its message at every man in the street, but is concentrating primarily upon the business community—and upon investors particularly. It is telling the simple, but not well-known, story that the railroads are a necessary and modern industry; and that they would be serving the public far more satisfactorily if they were given the degree of freedom of managerial discretion that other competitive business enjoys. Whether this publicity program can be continued depends, of course, on what the railroads and the supply industry think of its effectiveness—whether contributors can be found in sufficient number who believe that a campaign of this kind is likely to repay its not inconsiderable cost.

When the question is raised whether a new organization of railroad suppliers is needed to continue such a program as this—that is one the suppliers must answer for themselves. In the meantime, the "committee" cannot be truly said to be in competition with any other organization of suppliers, because it is not doing a job which in any way duplicates that being done by any organization. The suppliers themselves will do the deciding as to (1) whether an effort of this kind is likely to repay its cost to them, and (2) whether, if the program is considered worthwhile, it is the "committee" or some other group which should continue the effort.

Our own belief is that the railroads are going to like this program, at least in the main; and that suppliers will be gratified at the demonstration of their ability to take the initiative in a project of this kind without "crossing up" the railroads' own efforts. Possibly, the way to get the right answer to the question of how efforts in this direction should be continued (assuming they should be) is for the leaders in the supply business to canvas carefully the results of the present effort, and then try to agree among themselves as to the following: (1) to what degree the supply industry is warranted in endeavoring to promote its own interest in the traffic, earnings and credit of the railroads; and (2) if the answer to the first question is a positive one, then what form and organization such promotional efforts should take in the future. Whatever course is followed, it ought to be one in which suppliers "across the board" will participate. An effective and sustained program must have wide support, and the good-will of the entire supply fraternity.

FIVE HUNDRED DOLLARS CHANGES HANDS—Winner of the *Railway Age* essay contest, William J. Rae, (right), gets check from Warren Brown, president of the Monon, who put up the prize money and served as one of the judges.

The Railroad's Inherent Advantages

By WILLIAM J. RAE
Traffic Manager,
Lever Brothers Limited,
Toronto, Ont.

In addition to being firmly imbedded in statutes concerned with transportation, the term "inherent advantages," usually coupled with a plea for their preservation, frequently flavors the speeches and writings of politicians whenever they find it expedient to discuss transportation legislation or the various agencies of transportation. This phrase is a haven of refuge for the after-dinner speaker in "mixed" (i.e., more than one type of carrier represented) company, and the momentarily safe answer to many embarassingly specific questions. In spite of frequency and vehemence of use, there is little evidence that speakers and popular writers have given much thought to its meaning or implication, for politicians and regulatory tribunals alike seem to avoid all but lip service to it.

What Is What

Nevertheless, since the term is used in legislation, it must have a meaning reasonably determinable, even if this is not strictly required by oratory. It will be to our advantage to reach some definition before attempting discussion. "Advantage," in the context, implies the ability of one agency to attain some desired end or perform some action with greater facility, or more efficient expenditure of resources or time, than another. It is strictly comparative and must refer to the railway in relation to its various competitors by road, water and air. "Inherent" suggests an advantage that flows from the nature of the particular carrier's technique. "Inherent advantage," therefore, must be relative efficiency that springs from the fundamental character of the operation, whether or not the agency of transportation actually makes the most of the intrinsic superiority, or is allowed to do so. It is not concerned with the advantages or disadvantages caused by legislation or social controls.

At this point we must be clear as to the end to which this relative efficiency is directed. An act directed to one end is not necessarily efficient when viewed with another goal in mind. Is this objective not the provision of transportation with the least expenditure and the most efficient use of the elements of cost, i.e., labor, land and capital, whether public or private? Does not this imply the attempt by the management of the carrier concerned to make a profit? In fact, within broad limits, the ability to make a profit is the measure of how effectively the inherent advantages are exploited, after due consideration is given to social and political restriction on that effort.

What then, in the light of this definition, are the inherent advantages of the railway? What are the characteristics of the railway structure and method of operation that give it advantages over its competitors? These must in some sense first be physical, but, as we hope to demonstrate, their final and most important

> "It must be quickly recognized that unless the railway is permitted to obtain traffic in large volume, it will not produce transportation at low unit costs, but on the contrary, the so-called inherent advantage will become an inherent disadvantage and result in not low cost but very high cost transportation."

ABOUT THE WINNER

The judges in the "inherent advantages" essay contest, conducted by *Railway Age* (see issue of January 18, page 18, for details), have selected the winning essay, which has won for its author the $500 prize offered by President Warren W. Brown of the Monon. The winner is W. J. Rae, traffic manager for Lever Brothers Limited, of Toronto. Here is his winning essay—setting forth what the "inherent advantages" of railroad service are, and the steps necessary to secure them.

Mr. Rae is 43 years old, and was born at Stratford, Ont., where his father, before his retirement, was boiler shop foreman for the Canadian National. Mr. Rae was graduated with honors from the University of Toronto, where he majored in transportation under the late Professor W. T. Jackman. He also has taken several other university extension courses in law and traffic management.

He began his business career as a management trainee with Canada Packers Limited, at Toronto, spending most of his time in the traffic department. He went to Lever Brothers as traffic manager in 1941. He has been active in traffic and transportation association work and is at present chairman of the Ontario Division of the Canadian Industrial Traffic League and a director of the American Society of Traffic and Transportation.

The judges in this contest—President Brown; A. H. Schwietert, traffic director, Chicago Association of Commerce & Industry; and Professor G. Lloyd Wilson, of the University of Pennsylvania—were confronted with an ardous task, since they had to make their selection from among 184 essays entered in the contest. Besides the essay they chose as the winner, they designated as "distinguished contributions" nine other essays from the following entrants:

Charles Weiss, assistant engineer, Pennsylvania —Vaparaiso, Ind.;

William K. Tate, vice-president—traffic, Nashville, Chattanooga & St. Louis—Nashville;

Arthur C. Roy, general traffic manager, Pennsylvania Glass Sand Corporation—Pittsburgh;

Dr. Dudley F. Pegrum, professor of economics, University of California at Los Angeles;

Elbert R. Leigh, assistant commerce attorney, Louisville & Nashville—Louisville;

G. C. Campbell, assistant to transportation economist, Railway Association of Canada—Montreal;

Charles A. Kelly, rate analyst, Aluminum Company of America—Dravosburg, Pa.;

James A. McDonald, executive trainee, Grand Trunk, Western—Montreal; and

J. W. Barriger, vice-president, Rock Island. —Chicago.

It is probable that one or two essays from the "distinguished" list will be published in later issues of *Railway Age*; and plans are now under way to incorporate the prize-winning paper and all or most of those designated as "distinguished" in a pamphlet. This pamphlet will be made available for general distribution, and should constitute a substantial contribution to the literature on this vital and timely subject.—*Editor*.

manifestation may well be in pricing, or more simply in the setting of rates.

Less Power on RRs

Although completely fundamental to the idea of a railroad, whether using horse, man, or mechanical power, whether stationary engines or locomotives, it is frequently overlooked that on a properly constructed railway the amount of power required per unit of transportation is small. If this were not so, there would be no railways. It is only necessary to compare the horsepower of even the largest locomotive, designed to handle 5,000 or more trailing tons, with the horsepower of the large transport and passenger plane, or the combined horsepower of the trucks required to handle a like tonnage. Furthermore, it is relatively cheap power to build and maintain, in terms of the units of transportation provided. Only the steamship rivals or surpasses the railway in this characteristic.

Akin to this power advantage is the relatively small amount of labor required. One has only to visualize the five- or six-man crew of a railway train and compare it with the number of truck drivers and airplane crews required to move a like tonnage, to recognize the nature of the advantages inherent in the railway operation. Not so evident but just as real are the few men required to maintain equipment as compared to road and air competitors, relative to the tonnage handled. The highway carrier interests, however, do recognize this, and attempt to make political capital out of an economic disadvantage by drawing attention to the large numbers dependent for their livelihood on the motor transport industry.

Interchangeability of equipment is another advantage inherent in the modern railway, which frequently escapes comment and appreciation only because it is so commonplace. One has only to observe the attempts of competitive carriers to achieve in some small measure the same advantage to recognize how desirable it is,

"American railways can and do produce a ton-mile of freight transportation at a cost so much below the cost of the same unit by air or truck transport that the comparison is startling! One wonders how the other agencies of transportation can possibly attract and hold the patronage they do."

and how fundamental to current railway operation. Those familiar with the great strides taken by the material handling industries in the last decade will quickly recognize the familiar freight car as one of the earliest, and still one of the most efficient "unit-loads." Transportation is material handling, and the railway should, by background and interest, be the foremost exponent of its techniques, on the broadest scale. Few unit loads are as large as the normal freight carload, or travel so far without additional "handling."

There are a number of subsidiary physical advantages—such as freedom from weather interference, comparative freedom from extreme traffic conditions, and control of right of way—all quite inherent in the techniques of railroading, but not sufficiently important individually to be the subject of detailed reference. In fact, railway men may sometimes consider them to be disadvantages, when they think about the problems of maintaining roadbed, safety devices, keeping the right of way clear of snow, and all the other hazards of maintaining private property in a public service, never quite free from regulation, or the threat of it, by some public body.

RRs' Low Cost

These operating advantages are real, clearly witnessed by the fact that American railways can and do produce a ton-mile of freight transportation at a cost so much below the cost of the same unit by air or truck transport that the comparison is startling! One wonders how the other agencies of transportation can possibly attract and hold the patronage they do. Even the water carriers in coastal and internal waters find it difficult to provide transportation at such costs.

It is clear, however, that we have not yet come to grips with the real issue. The inherent advantages so far stated are not fundamentally threatened or denied by anyone. Full crew and train-limit laws and other kindred restrictions may limit their ultimate development, but nothing more. The fact is that the advantages so far mentioned except the mechanical advantages of wheel on rail are all manifestations of the general principle that a railway of any size requires heavy capital investment, and a substantial supply of labor, including all management, sales, control and procurement groups as well as operating and maintenance personnel, whether a small tonnage or a large one is contemplated or immediately available. The railway is therefore most responsive to the economic pressures of overhead costs, and reaps the reward of decreasing unit costs in such dramatic fashion that it is a more imposing example of this characteristic type of American industry than the motor car or the packaged food industries, and, I believe, much more intricate in its manifestations.

Therefore, the unit cost of railway transportation decreases as the number of units of transportation provided increases. Additional staff and facilities may be required as tonnage increases, and momentarily the cost per unit may increase rather than decrease until tonnage catches up with the capacity of the added units. However, assuming management has properly determined the facilities to be added in relation to the business offered, the principle continues to work most powerfully in favor of the railroad. Intensive use of facilities within their capacity normally builds lower unit costs. The important fact is that, as the units of transportation provided increase, they do not call for like increases in total cost of the operation, and therefore the unit cost decreases.

Granted, this same influence is at work in other transportation agencies, but to a much restricted degree. A comparatively small increase in tonnage forces a transport operator to buy another truck, and take on another driver, but it takes a relatively large increase in traffic to require additional facilities on the railway. Like comparisons may be made with air transport. Relatively speaking, this is an advantage so inherent in the technique of railroad operation that it cannot be duplicated in all its manifestations by any other type of carrier. This is a real "inherent advantage" worthy of legislation and oratory.

Volume a "Must"

It must be quickly recognized that unless the railway is permitted to obtain traffic in large volume, it will not produce transportation at low unit costs, but on the contrary, the so-called inherent advantage will become an inherent disadvantage and result in not low cost, but very high cost transportation. This is the real "inherent advantage" that must be protected and which the railway must be free to exploit.

And how does the railway set about obtaining this large volume of traffic? *Fundamentally by pricing its product in such a way as to atract the greatest tonnage.* Stated in such a way it has a deceptively easy sound,

"Too many railway managers talk vaguely of 'average' costs and accept without understanding the so-called 'costs' provided by research and operating departments. The fact that railway costing is perhaps the most difficult of all industrial costing is no reason for abandoning it."

"If railway managers do not fight for their freedom they will never reap the fruits of the railway's inherent advantages. Political, and momentary social, objectives will be imposed upon them that will prevent attainment."

because it ignores another objective essential to our economic organization, i.e., the making of a profit, or at least the maintenance of solvency. There are many examples of business led astray by this simple proposition. It is usually easy to attract tonnage by providing very low prices, but indiscriminate use of this formula leads to insolvency and waste. How to keep the price of the product as low as possible, while making an adequate, or more realistically the highest, profit concomitant with the fulfilment of service obligations to the public, is a more proper statement of the problem.

Naturally the first reaction to this requirement is to decide that each transportation movement must be priced at least high enough to pay all the costs of producing it and as much more as can be obtained. But this is impossible, unless the railway chooses to give up that major inherent advantage of high overheads and decreasing unit costs, which it could not do even if it would remain in any modern sense a railway. Fortunately the real solution is even better, incorporating as it does another major "inherent advantage."

Costs Elusive

This second major inherent advantage is the fact that railway transportation is a classic example (in the terminology of the economist) of "joint product." The full cost of any particular movement of goods by railway is indeterminate, and cannot be otherwise, as a great many separate and distinct transportation movements are produced at the same time by some or all of the same equipment and facilities. Not only is the total cost of any particular movement indeterminate, but only a small part of the known elements of cost can be directly attributed to the movement in question. Furthermore, most of the costs go on whether the individual movement takes place or not. The result is that the lowest price at which the railway can offer any particular service—and remain solvent—is one which just recovers the directly attributable "out-of-pocket" costs. The most important fact about this price is that it is usually very low. That is a real advantage and "inherent" in the fullest sense. Any price lower than the sum of the out-of-pocket costs would attract freight which it would be better to do without. Freight which pays more is advantageous for the railway to obtain — except to the extent that it may prevent the handling of some other freight which would pay an even higher rate relative to out-of-pocket costs.

That is not to say that this low "out-of-pocket cost" rate is that which should be charged. Very seldom would this be the case. The correct rate, once the out-of-pocket cost point has been surpassed, is that which results in the largest gross revenue, i.e., tonnage times the price or rate. If, as a result of lowering the rate, the tonnage increases enough to augment that gross revenue, then the lower rate is the better one. Likewise, if a higher rate reduces the tonnage offered, but increases the gross revenue, the higher rate is more desirable. The importance of this proposition is most clearly seen when considered along with another elementary economic observation: that generally, but with many modifications, the lower the price, the more goods will be purchased. The railway's inherent advantage is that it can, in pragmatic search for this price at which the maximum return will be obtained, lower rates further than most of its competitors, with the possible exception of large bulk water carriers—particularly if all the costs of their operations are charged to and borne by the various competing carriers.

It might almost be said that this is the inherent advantage granted to the railways to counterbalance their fundamental need for volume, and to prompt them to satisfy that need. In another light it is simply the common phenomenon of increasing returns as volume increases under conditions of overhead cost, seen from a different viewpoint.

An Old Story

It will have occurred to anyone familiar with the subject that all that has so far been written is no more than has been said in one form or another in even the most elementary texts on transportation economics. Nothing new has been said, nor was it intended to be otherwise. The basic facts have been known for many years, but have become obscured both by their simplicity and by the welter of social, as contrasted with economic, objectives being sought by the many regional and political interests that combine to constitute the nation. That is not to say that these other objectives are necessarily of lesser worth, although many of them in the light of experience have been questionable, but simply that they have diverted our attention from a purely economic phenomenon of great importance to our material welfare. Our purpose is to redirect attention to it, for even some railway managements seem to have overlooked the fundamental importance of this advantage.

Cost Data Needed

What action then is indicated? First, would seem to be the direction of railway accounting talents to closer and more illuminating studies of out-of-pocket costs

in connection with all important sources and types of traffic. By the very nature of the problem, this task is endless. Furthermore, it is not enough to make the studies—they must be presented to the sales management, or traffic departments in transportation parlance, in forms that will make the information informative. It is almost a corollary that railway traffic managers should be taught to use the information critically and with discrimination. Too many railway traffic managers talk vaguely of "average" costs and accept without understanding the so-called "costs" provided by research and operating departments. The fact that railway costing is perhaps the most difficult of all industrial costing is no reason for abandoning it. Rather it is an incentive to develop it in spite of its problems. Without appropriate cost information railway rates cannot be properly determined, in the sense that the resultant rate will supply service to the nation at the lowest possible cost per unit of transportation and at the same provide a maximum of service, and as large a profit as possible. That is what railway management is supposed to be doing.

It follows, of course, that detailed studies of the major sources of traffic should also be made to determine as closely as possible the rates that will bring about the greatest gross revenue. The writer has seen very little evidence of serious studies along these lines on a continuing and organized basis. Having made the studies, the railways should use them. Skillful use of pricing is needed to capitalize on the railway's inherent advantages.

Fight For Rights

Secondly, the railways should work unremittingly to regain the right to price their own product, transportation service, or more simply, to make use of the information obtained by the above studies. All restrictions, based primarily on monopoly conditions or the threat of such conditions, on the right of the railway to set its own prices, should be removed except where such conditions actually continue to exist. It is not always clear to the interested spectators that railway managements are really convinced that they would like to be masters in their own house, and be completely responsible for their own rates. How strongly do they actually object to a government agency taking over their management functions and declaring that rates at certain levels are "unreasonable," i.e., that the railway traffic manager is either dishonest or incompetent because he is proposing to sell at prices lower or higher than his business judgment should indicate? But, if railway managers do not fight for their freedom they will never reap the fruits of the railway's inherent advantages. Political, and momentary social, objectives will be imposed upon them that will prevent attainment.

The railways should therefore object most strenuously to the use of freight rates as a means of subsidizing geographic areas, political entities, industries or products. Railroading is a business, and tampering with prices always produces side effects and distortions of economic use, which finally increase the total cost of the national product and benefits other than those for whom the subsidy was originally conceived. If any subsidy is required (and it is no part of this submission to argue that subsidies are necessarily wrong except in the strictest economic sense) it should be a direct cash payment to the individuals or groups for whom the assistance is meant. Railway or other transportation rates should not be used as instruments of national policy, and the railway should reject all such proposals no matter what carrier is involved, and no matter how enticing the bait that is offered.

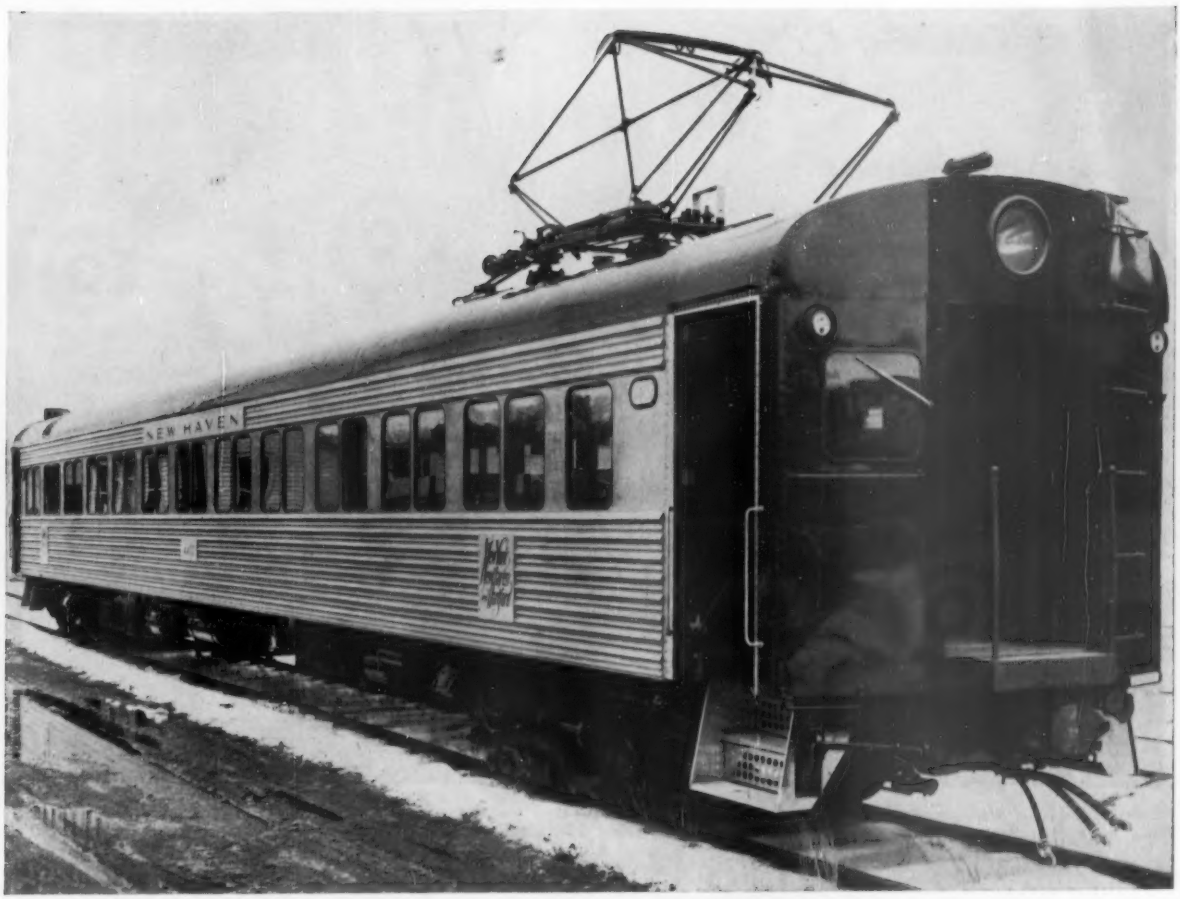
In this connection, the railways should strive to have removed the highly legalistic limitations on rate-making. In this day and age an "unreasonable" rate should be one that is clearly below out-of-pocket costs, or so high as to be extortionate in the absence of competition, and proof of absence of competition should be a required condition to support the charge, unless it is meant to indicate that the railway is deliberately favoring one element in the business community at the expense of another. "Unjust discrimination" likewise should apply only where conditions are very similar, and where lack of competition suggests the possibility of quasi-monopolistic action on the part of the railway. The railways must keep in mind, however, that shippers will never let them attain the removal of these limitations until they are satisfied as to the railways' ability and intention to price their services efficiently and fairly.

It was noted briefly above that the railways' inherent pricing advantage is only fully applicable when all competing carriers have charged against them the full cost of their operations. Therefore the railways should continue their fight to put their competition on a full-cost basis. This is not to say that the railways should oppose all subsidy to competing carriers as a matter of principle. They should oppose subsidies which permit them to lower rates below what they otherwise would find it necessary to charge. It is quite conceivable that water carriers, airlines and trucks should get government assistance, but it should be given in a manner and under controls that prevent as much as possible the setting of prices on other than economic bases.

In implementing this program the railways should be careful to avoid vindicativeness and super-showmanship, not underestimating the essential intelligence and good taste of their public. Since much of what is proposed implies the need for a different social and political outlook on the part of the citizens of the country, the railways must engage in a broad program of economic education for the voting public, not the selling of a small number of "ideas" or slogans chosen for their ease of "recall" rather than factual context, techniques developed for the selling of cigarettes and toothpaste.

(*Continued on page* 32)

Opinions expressed in this prize-winning essay are those of its author, and do not necessarily reflect the views of Lever Brothers Limited or of companies associated with it.



EACH OF THE 100 NEW CARS is a motor car, and is powered by four 100-hp direct-current motors.

THESE NEW CARS TO IMPROVE . . .

New Haven Commuter Service

Use of rectifier type m-u cars in quantity will establish value of this type of motive power for future application

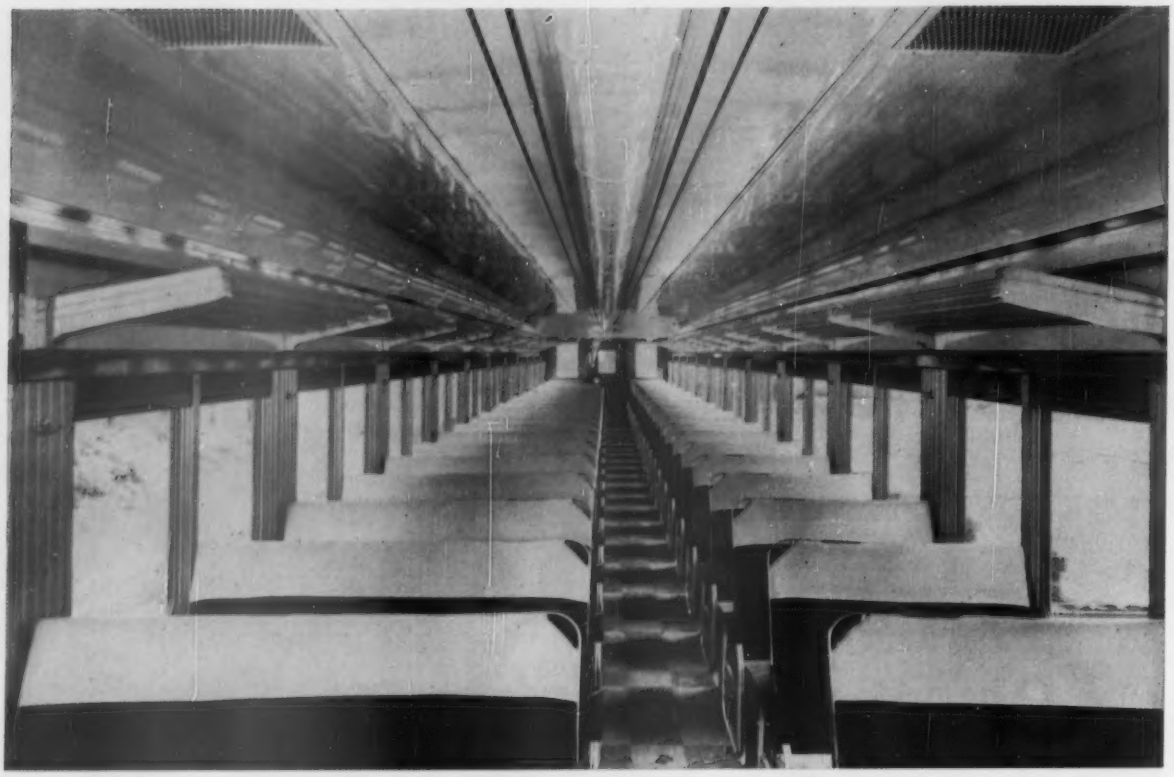
The first of an order for 100 rectifier-type, multiple-unit commuter cars was delivered to the New Haven last February 16. Many of the cars are now in service, the rest are under construction at the Worcester, Mass., plant of the Pullman-Standard Car Manufacturing Company; and the tentative schedule of delivery is such that all 100 units will have been completed and placed in service by the week of September 20.

The 100 cars include 89 120-passenger coaches, seven 92-passenger combination passenger and baggage cars, three 65-passenger club cars for Special Car Associates, and one passenger club car for New Canaan Group.

The cars are of all-steel construction, having stainless steel exterior sheathing and fluting applied to each side of the car. The underframe and superstructure framing and the vestibules are made of high-tensile steel, which is being used, as in all postwar passenger car equipment, to gain a considerable saving in weight over the carbon steel used in prewar design. Roofs and ends of the cars are painted, and the sides are natural-finish stainless steel.

Each car is equipped with Safety eight-ton electro-mechanical air conditioning, which diffuses conditioned air into the interior of the car through Safety distributors. An added feature has been built into this air conditioning system to provide emergency ventilation in the event of a power failure en route.

All 100 cars will be equipped with Westinghouse Electric Corporation power propulsion equipment, especially designed for these cars. This power equipment, an entirely new design, was described in the March 15 issue of *Railway Age*. It is known as rectifier-type equipment, and the basic principles involved permit rectifying or converting 11,000-volt, 25-



HEADLININGS are bone white, bulkhead walls powder blue, and wainscoting below windows a dark blue. Each of 89 coaches seats 120 passengers.

cycle, ac current to 600-volt, dc current. The chief advantages revolve about the use of dc traction motors similar to those used widely in diesel locomotive construction of a standard and tried design, considerable weight saving, and elimination of duplicate equipment to handle ac and dc current separately. It is estimated there is a potential weight saving of approximately 20,000 lb in the use of this special power propulsion equipment over conventional ac-dc equipment now in use on older New Haven cars equipped with series ac-dc motors.

Each of the 100 new cars will be a power car, the trucks of which will be equipped with two 100-hp, truck-mounted straight dc traction motors, one per axle, for a total of four traction motors, or 400 hp per car, adding up to 4,800 hp for a complete 12-car train.

The present latest type motor cars to be retained in service, and which are capable of hauling three trailer cars per motor car, are equipped with four 250-hp, ac-dc traction motors, for a total of 1,000 hp per car.

For a given train of 12 cars, including three motor cars and nine trailer cars, this would add up to 3,000 hp. It is obvious, therefore, that the operating performance of the new cars is considerably superior to the latest type of present cars now in service, and will result in increased acceleration rates and reduced overall running time compared to the older commuter equipment.

The cars have been designed for a maximum speed of 80 mph and an average acceleration rate of 1 mph per second on level tangent track, based on 14 intermediate stops. The braking system which will be applied to these cars will provide an approximate average retardation rate of 1½ mph per second.

Each car is equipped with four-wheel inside swing-hanger type, all-coil spring-suspension trucks. Truck frames and bolsters are of cast steel, and the spring suspension is controlled by a hydraulic shock absorber mounted on each side of the truck. Heavy-duty, 6-in. x 11-in. roller bearings are applied to the journal end of each axle. Trucks are equipped with latest design clasp brake rigging, utilizing truck-mounted brake cylinders. Wheels are 36-in. multiple wear rolled steel with AAR contour. The design features have been predicated on producing considerably better riding conditions than obtained in older style cars equipped with conventional trucks.

All 100 cars will be equipped with the Westinghouse Air Brake Company's high-speed control, electro-mechanical brake equipment. Air for the system is supplied from a 600-volt, dc motor-driven air compressor which operates at all times while the car is energized, either on ac or dc.

Each car is equipped with a manually operated power type hand brake, one located in the vestibule at each end of the car.

Each of the new motor cars has a single-type pan-

(*Continued on page* 32)

More Elbow Room for the ACL

GOING GREAT IN THE SAND—The ACL wants more room for spur and storage tracks at Smith Creek Yard and gets it in a hurry with two top-performing TD-18As on the job.

FOREMAN-OPERATOR climbed down from his TD-18A long enough to tell us he thinks they're tops. Here's why: *"INTERNATIONALS have the power to self-load scrapers and they can be maneuvered in almost any tight spot we encounter."*

Pair of INTERNATIONAL TD-18As power expansion of Atlantic Coast Line's Smith Creek Yard

When the Atlantic Coast Line needed more room for spur and storage tracks at its Smith Creek Yard at Wilmington, North Carolina, two INTERNATIONAL TD-18A crawlers did all the ground work.

A foreman, who also operates one of the crawlers, puts it this way:

"We work in all types of soil in this railroad construction and the TD-18A is one of the best crawlers for moving dirt fast. We've worked in sand for eleven months straight and we've had very low maintenance."

This story is repeated the country over. INTERNATIONAL crawlers deliver maximum power at minimum operating cost—day in, day out—on any kind of ground.

These rugged red crawlers will give you the same top performance. See them in action. All you have to do is ask your nearby INTERNATIONAL Industrial Distributor for a demonstration—on your own job—of "power that pays."

INTERNATIONAL HARVESTER COMPANY, CHICAGO 1, ILLINOIS

POWER THAT PAYS

INTERNATIONAL

INTERNATIONAL HARVESTER

For everything in Earthmoving

ON TRACKS ...ON RUBBER

See INTERNATIONAL'S Complete Earthmoving Line

One eastern road makes extensive use of aluminum paint . . .

On signal bridges . . .

Why PRR Uses Aluminum Paint

Investigation begun in 1932 on catenary poles leads to extensive use for many types of metal structures

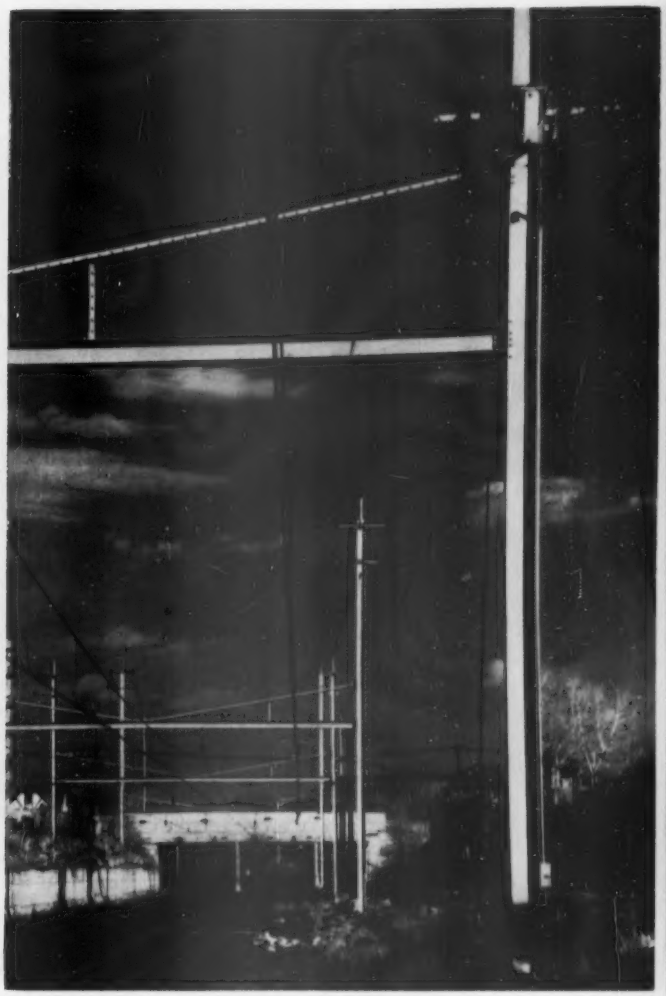
Acceptance of aluminum paint for protection of equipment installations on the Pennsylvania's electrified lines has been such that its use has been extended to the exteriors of structures all over the railroad.

Aluminum paint was initially used on a large scale on the PRR in the Philadelphia area in 1929, for painting transmission and catenary poles and bridges. Its present widespread use stems from tests the railroad performed between 1932 and 1947.

Between 1932 and 1937, several series of test paintings were made on catenary poles along the Schuylkill Valley branch, which was being electrified from Philadelphia to Norristown, Pa. Groups of poles chosen for the tests were painted with various aluminum and gray oil paints and with standard PRR black. This area was selected because it was primarily industrial and offered severe exposure conditions which would be a factor in evaluation of the various paints.

In 1947, a special committee of engineers examined the test installations to determine the condition of the paints. Particular attention was paid to general appearance, gloss, elasticity (or, conversely, brittleness), and amount of rust. An estimate of the remaining protection was made by evaluating such factors as spread of rust spots,

steel viaducts, and . . .



catenary structures

blisters, peeling and pitting. Special external influences taken into account because of the highly industrial nature of the area included the proximity of chemical industries, highly corrosive fumes, and trapped smoke and gases from railroad locomotives.

Use Extended

As a result of this examination, instructions were issued to division engineers to the effect that, when it was necessary to repair catenary and transmission poles, aluminum paint was to be applied. Later, the use of this paint was extended to telegraph and signal apparatus over the entire system. The sole exception to this order applied to those locations or parts where light-colored paint would become quickly soiled, such as dwarf signals, valves in pipe and air lines, switch and lock movements, and other locations within a foot or so of the ground, which dirtied immediately after painting. For these situations, black paint is specified.

Use of aluminum paint has now been extended to cover protection of all structures where appearance is important. These include undergrade and overhead bridges over important highways, catenary poles and bridges, transmission poles, signal and telegraph equipment, signal bridges, instrument houses and cases, unit compressor cases and air lines, and telephone boxes and supports.

On the basis of the earlier tests, and periodic tests that have been carried on ever since, PRR technicians have determined the pigment and vehicle necessary to answer the railroad's maintenance needs.

Has Psychological Effect

Interestingly enough, the Pennsylvania has found that use of aluminum paint has an unusual psychological effect on workers. It is said, for instance, that men in the maintenance field seem to take great pride in its use and find it an incentive toward better maintenance procedures. As a result, the railroad has to guard against its indiscriminate use just to "brighten up" the right of way.

INHERENT ADVANTAGES

(*Continued from page 26*)

This is a much more serious business. Many of the railway's problems are political in its most inclusive sense. It has been demonstrated many times, and is indeed the theory upon which our concept of government depends, that what the voter knows and understands the politician will soon learn and apply. That is what the politician is for. The greater appreciation the public attains of the economic facts of life, the more certain that public policy will reflect that understanding. If the public can learn to clean its teeth regularly and assimilate the more elementary rules of health, it can surely learn the basic rules of economic organization. The railways have one of the largest stakes in that education, for unless it is accomplished the railways will eventually become not a business, but a department of government.

What should the Interstate Commerce Commission do about the railway's inherent advantages? It is difficult to see what the commission can do without a change in legislative direction, which will come about if the railways to do their part to educate the electorate and themselves, and will not if they shirk it. The commission's decisions have been so thoroughly accepted as being in accordance with present legislation that it is unrealistic to expect the commission to change its views without direction from the law-making body.

Governments of course should review their approach to control of competitive business enterprises, and direct their attention to the maintenance of unsubsidized competition. They should see that the state does not assume without recompense important costs of any of the carriers, although it may be necessary for governments to provide the services.

If subsidy is required as a matter of public policy it should be a direct payment after an audit has determined that prices at which the services are to be sold to the public are not lower than their true costs would indicate as necessary. If airlines are necessary for national defense let the national defense budget bear the cost. If necessary for business, let business bear the cost.

However, we must not expect governments to act with any strength unless the voting public understands and approves of such proposals, as there are too many short-term advantages to be gained from the present practices. The railways will have to create circumstances in which changes are possible, and they can do this only by taking their story to the people intelligently, moderately and persistently, and by practicing what they preach. They would do well to remember that their own employees as well as those of competing carriers are part of that public.

In summary it is held that the primary inherent advantage of the railway is its ability:

(1) To handle large volumes of heterogeneous traffic at low costs;

(2) To accept added volume at small additional cost of operation; and

(3) To price its service in such a way as to attract the larger volume required to reduce costs. The railway must exploit these advantages fully, and campaign intelligently and unremittingly to maintain conditions under which such exploitation is possible.

NEW HAVEN COMMUTER SERVICE

(*Continued from page 28*)

tograph mounted on the roof at the toilet end of the car, which serves to collect the 11,000-volt ac current from the overhead transmission lines. Each side of each truck is equipped with conventional type 600-volt, dc third-rail current collector shoe assemblies.

Operators' compartments are adequately heated and thoroughly insulated, and have shatterproof glass throughout.

Conventional design wide vestibules having exit openings as wide as on main-line postwar passenger equipment are provided at each end of each car. Open, fixed-type stainless steel platform steps with non-skid treads are used.

The cars are heated by electric sidewall heaters, end blower heaters and overhead heat, all under Minneapolis-Honeywell electronic control. The heating system has been designed so that in mild weather heat is provided by an overhead heating unit which tempers the incoming air to the air conditioning unit. This overhead heat is controlled in three stages and varies automatically with a drop in temperature. When the temperature drop is severe enough the sidewall heat is automatically applied to the car. The end blower heaters located on the inside of the body entrance doors provide heat automatically to prevent cold drafts at the ends of the passenger compartment, resulting from the frequent opening of body end doors. The entire floor of the passenger compartment is covered with 3/16-in. thick heavy-duty 9-in. square rubber tiles.

The new cars are all equipped with fluorescent lighting throughout the interior, which provides approximately 20 footcandles of illumination at the reading level.

This is more than double the light intensity in the older m-u cars. A-c power for fluorescent lighting is supplied by Safety motor alternators. Each car is equipped with an electro-mechanical water cooler, a single toilet room having flush-type toilet and cold wash water. Side windows in the passenger compartments are modern breather type double-glazed sash with Solex heat resistant glass on the outside and shatterproof glass on the inside. This type of window will remain clear at all times, barring damage from an outside source. The entire body of the car is thermally insulated by the use of 2-in. to 3-in. thick Johns-Manville insulation. This particular type of insulation also has high acoustical values.

The interior decorative scheme follows the pattern of other New Haven postwar passenger coaches, utilizing bone white headlining, powder blue bulkhead walls and dark blue lower wainscoting below the windows. Seats are upholstered in New Haven standard blue mohair similar to seats in other postwar passenger cars.

Flash the Red Light on Equipment and Maintenance Costs With "Liquid Aluminum"

Liquid Aluminum puts a fast stop to costly railroad maintenance and equipment replacement because it is amazingly resistant to rust . . . resists discoloration from smoke and fumes, too. It reflects up to 85% of heat and light rays . . . reduces evaporation losses . . . actually beautifies as it protects.

Put *Liquid Aluminum* to work on your freight and passenger cars, signaling and communication equipment, bridges, tanks, towers, buildings and other railroad structures and equipment. It offers you economical protection that turns the red light on maintenance and replacement costs . . . gives the green light to a more profitable operation.

Look for the *Liquid Aluminum* label on the aluminum paint you choose. It is your assurance of a quality product made by leading paint manufacturers to approved minimum standards. Ask your paint supplier or write for names of manufacturers to Reynolds Metals Company, 2500 South Third Street, Louisville 1, Kentucky.

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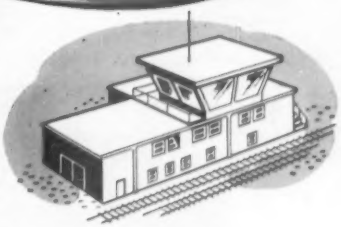
It's *Liquid Aluminum* with asphalt for roofs. It will add years to roof life . . . and keep buildings cooler in summer to cut air conditioning costs and increase employee efficiency and morale. Look for the *Liquid Aluminum* label and the special Warranty Seal . . . they are your assurance of the right amount of aluminum pigment in an approved vehicle. Write for folder to address above.



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FORK LIFT TRUCKS

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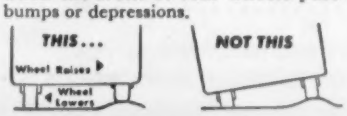

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Railway Officers

(Continued from page 13)

ticket agent there, has been promoted to Petersburg agent.

E. F. Stone, general western freight agent at Chicago, has been appointed general eastern freight agent at New York, succeeding the late **G. A. Crueger** (*Railway Age*, May 24). **C. E. Gorman,** general agent at Pittsburgh, succeeds Mr. Stone as general western freight agent at Chicago. **E. T. Vineyard,** commercial agent at Oklahoma City, has been promoted to general agent at Columbia, S.C., succeeding **J. T. Cutcliff,** who has been transferred to Pittsburgh.

The office of **T. W. Quinn,** general agent at Charlotte, N.C., has been moved to Room 1901, Liberty Life building.

J. C. Dellinger has been appointed district freight and passenger agent at Petersburg, Va. The position of traveling passenger agent at Petersburg, formerly held by Mr. Dellinger, has been abolished.

J. W. Ryan, western passenger agent at Chicago, has been appointed general western passenger agent there, while **B. C. Farfsing,** district passenger agent at Cincinnati, becomes division passenger agent at that point.

SOUTHERN PACIFIC TRANSPORT COMPANY.—G. H. Wilshusen has been named mechanical engineer at Houston, Tex.

UNION PACIFIC. — Mrs. Irene Keeffe, assistant director of the UP's historical museum at Omaha, has been appointed director, succeeding **Mrs. Ruth C. Hamilton,** who retired June 30. The new assistant director is **Miss Erma Smatlan.**

WABASH.—George M. Irvin, city passenger agent at St. Louis, has been named division passenger agent there, succeeding **Frank L. McNally,** who retired June 1.

F. P. Scharffenberger has been appointed general freight agent at St. Louis, succeeding **L. W. Cole,** retired. **C. B. Willi,** division freight and passenger agent at Moberly, Mo., has been named assistant to freight traffic manager at St. Louis. **E. H. Ahlers** succeeds Mr. Willi.

OBITUARY

Earl H. Bullock, assistant signal engineer of the **Union Pacific** at Omaha, died June 20 at his home in that city.

Walter S. Iden, freight claim agent of the **Missouri-Kansas-Texas** at Dallas, Tex., died recently.

Carleton B. Harveson, 69, chief engineer maintenance of the **Baltimore & Ohio,** at Baltimore, died June 29 in Cincinnati.

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Some time ago, our young Carman made quite an observation. From reading *Railway Age's* personnel columns, he noticed a lot of changes being made constantly—promotions, transfers, retirements, deaths.

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IN THIS ISSUE

Bell Telephone System 6
Agency—N. W. Ayer & Son, Inc.

Electro-Motive Division, General Motors Corp. .....Front Cover
Agency—The Kudner Agency

Fairbanks-Morse & Co. .....Inside Front Cover
Agency—The Buchen Co.

General American Transportation Corp. 20
Agency—Weiss & Geller, Inc.

International Harvester Co. 29
Agency—Leo Burnett Co., Inc.

Iron & Steel Products, Inc. 35

Kershaw Mfg. Co. 18, 19
Agency—Tom Little

Lamson Mobilift Corp. 34
Agency—Carvel, Nelson & Powell

W. H. Miner, Inc. 1

Mississippi Valley Equipment Co. 35

Oxweld Railroad Service Co. 15
Agency—J. M. Mathes, Inc.

Railway Educational Bureau, The 35

Reynolds Metals Co. 33
Agency—Clinton E. Frank, Inc.

Ryerson, Joseph T. & Son, Inc. 36

The Symington-Gould Corp. .....Inside Back Cover
Agency—Ed. Wolff & Assoc.

Timken Roller Bearing Co., The .....Back Cover
Agency—Batten, Barton, Durstine & Osborn, Inc.

Union Switch & Signal 2
Agency—Batten, Barton, Durstine & Osborn, Inc.

Westinghouse Air Brake Company 5
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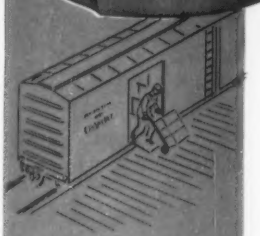

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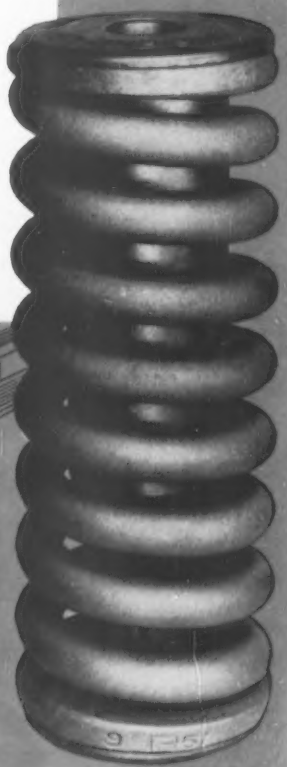

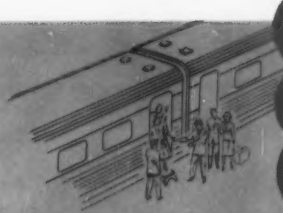

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Locomotives operate with less roll and vertical shock.
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This month Dr. Oscar Horger demonstrates that absence of lateral movement is one reason why:

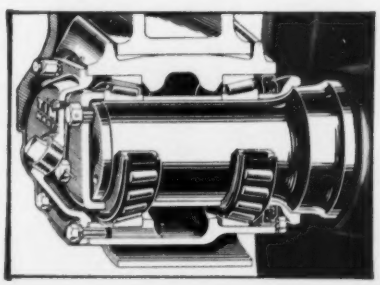
THE TAPER MAKES TIMKEN® THE ONLY JOURNAL BEARING THAT DELIVERS WHAT YOU EXPECT WHEN YOU BUY A ROLLER BEARING

YOU invest in roller bearings to end the hot box problem and cut operating and maintenance costs to a minimum. For two big reasons, the Timken® tapered roller bearing is the *one* bearing you can count on to protect that investment. It's the taper! Here's why:

1) No lateral movement within the bearing. Because of the high unit pressures in roller bearings, lateral movement scores the rollers and races, shortens bearing life. Lateral movement also pumps lubricant through the seal and out of the journal box, draws dirt and water in. And auxiliary thrust devices are needed to take the thrust resulting from lateral movement. These devices are hard to lubricate with grease, need more maintenance. In Timken bearings, the taper prevents lateral movement, permits the bearings to take thrust without other devices. There's no scuffing no pumping action. This helps end the hot box problem, means less maintenance, less lubricant, and longer bearing life.

2) Positive roller alignment. The taper holds ends of rollers snug against the rib, and there the wide area contact keeps the rollers properly aligned. Cage acts only as a spacer. The rollers can't skew to upset the full line contact. As a result, the load is always carried over the *full* length of the rollers.

Get what you pay for when you switch to roller bearings to end the hot box problem and cut operating and maintenance costs to a minimum. Get Timken *tapered* roller bearings. The Timken Roller Bearing Company, Canton 6, Ohio. Cable address: "TIMROSCO".



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